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WILDLIFE IN NORTH CAROLINA

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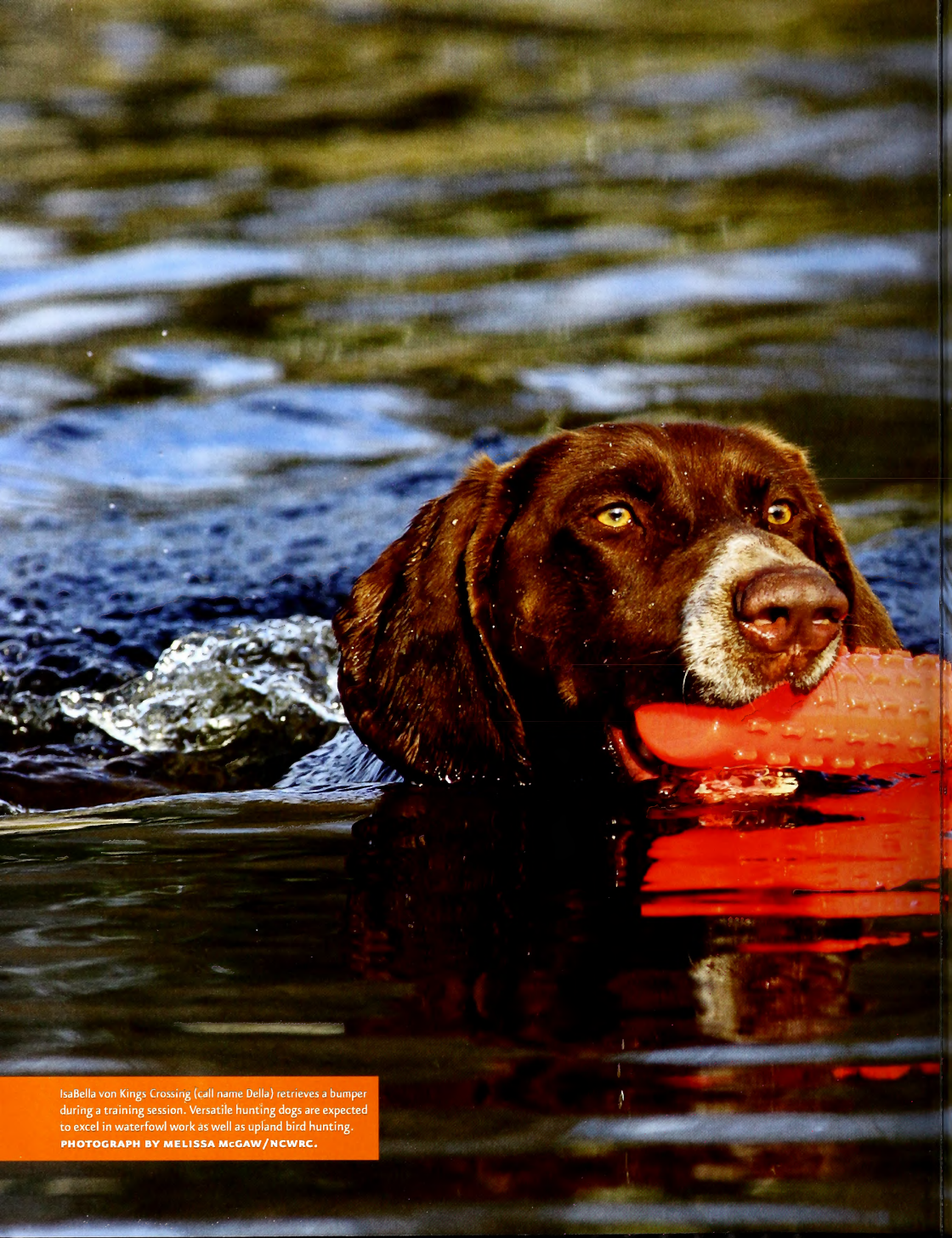
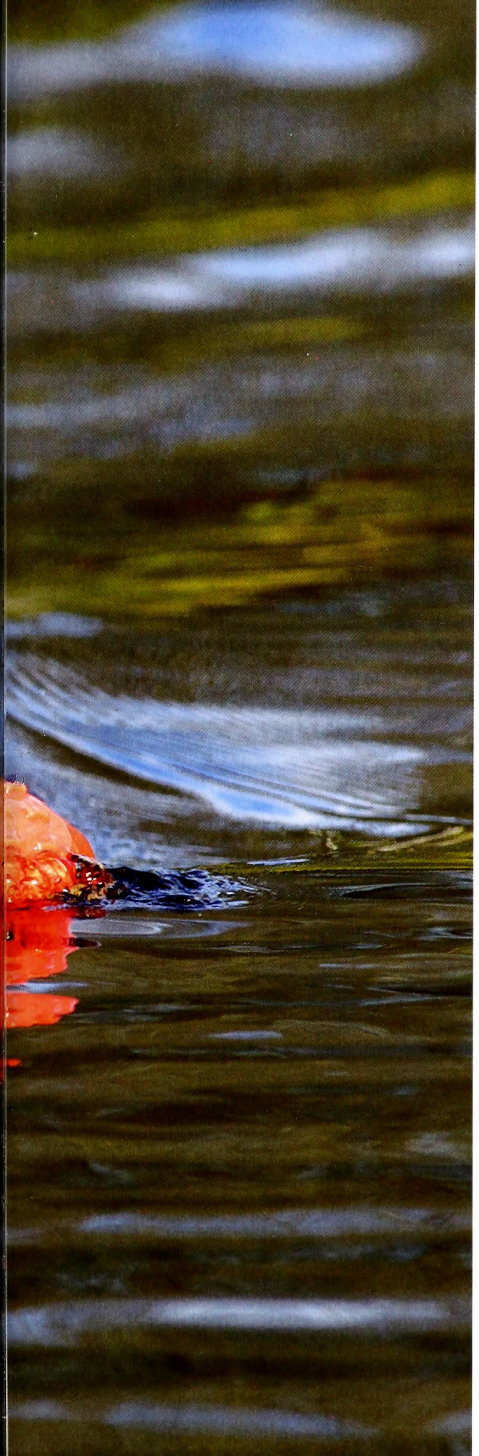


IsaBella von Kings Crossing (call name Della) retrieves a bumper during a training session. Versatile hunting dogs are expected to excel in waterfowl work as well as upland bird hunting.
PHOTOGRAPH BY MELISSA McGAW/NCWRC.



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Cover: North Carolina's foothills and mountains provide hundreds of miles of prime smallmouth bass habitat. Read "What Can Brown Do for You?" on page 4 to find out more about this fishery. PHOTOGRAPH BY ERIC ENGBRETSON.

Wildlife in North Carolina is the official educational publication of the North Carolina Wildlife Resources Commission. It is dedicated to the sound conservation of North Carolina's wildlife and other interrelated natural resources and also to the environment we share with them.

EDITOR'S NOTE

IN 1995 biologist Dennis Pauley coined the term "shifting baseline syndrome" in relation to fisheries. "Essentially this syndrome has arisen because each generation of fisheries scientists accepts as a baseline the stock size and species composition that occurred at the beginning of their careers, and uses this to evaluate changes," Pauley said. "When the next generation starts its career, the stocks have further declined, but it is the stocks at that time that serve as a new baseline."

MELISSA McGAW/NCWRC

Shifting baselines apply not only to scientists, but also to the rest of us. When we become old enough to observe the natural world, we accept the status of fish and wildlife at that point as our baseline, our normal. In my lifetime, for example, I have seen the demise of bobwhite quail as the preeminent game animal of our state, but at the same time have seen white-tailed deer and wild turkeys expand tremendously. It is estimated that North America has perhaps as many deer today as when European colonists arrived in the 16th century. As for wild turkeys, I never saw one when I was growing up in Granville County, despite spending much of my time in woods and fields. With my baseline, turkeys are plentiful today, but would they appear as such based on a 19th century baseline?

Perhaps the greatest disappearance among fish or wildlife in my lifetime has been river herring. Alewives and blueback herring fed millions of people on the East Coast for several centuries. The annual commercial take was multiple millions of pounds. Now the catch is all but zero, and every state except four along the Atlantic have moratoria on the directed harvest of the two species.

For someone my age, my baseline was an abundance of river herring, but for a 20-year-old today, river herring are only fish of older people's memories. Two consequences of the depletion of a species are that the animal gradually is forgotten by most people, and the culture associated with the species withers. The culture of quail hunting in my youth has all but disappeared, and I miss it very much. The culture associated with river herring has quickly faded in the seven years since a moratorium. River herring populations may be rebuilt to some fishable level, but the rich culture that flourished around a boney fish of unimaginable numbers will be only a shade of what it once was.

Jim Wilson

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RHODES POND
REDUX: Mulling an old pond's better plan

Rhodes Pond Memories

Thanks for a great article on Rhodes Pond. I'm sure many fishermen have great stories to tell of days on the water at this spectacular location. My younger brother Bill (I'm 78) from down at Oak Island had a very unusual experience last summer on our first visit. After leaving Lumberton well before daylight we arrived, thrilled at our first sight of Rhodes.

Upon putting in our canoe (Yes, I now know you never fish for big bass from a canoe.), it didn't take long before we were at least 3/4 of a mile from the landing. I hung my bait in the limb of a cypress and my little brother (age 74) just had to retrieve it for me. Well, as soon as he stood up in the canoe, we took a bath. The only thing good we did that day was on the way to Rhodes we had stopped by Hardee's for two coffees, and we kept our cups in case nature called.

Would you believe it takes almost an hour, standing in water to your chin, for two dummies to empty a canoe? Then to get back into the darn thing without capsizing again is very tricky. Needless to say, we came home wet, smelly and very embarrassed. But with a lot of baptized rods, tackle boxes, cell phones, billfolds, wristwatches, etc. Went back again a few weeks ago and caught two huge bass which I released for some other angler.

Lewis E. Bruce
Lumberton

Your article in the July/August issue states in the last paragraph that "gas motors are not allowed on the pond". Yet, the photo above shows a man fishing from a boat with a motor on the transom? No gas motors on the pond seems to me to means "no gas motors on the pond" period. Does this actually mean that as long as you don't run the motor you can have it on the boat? I wouldn't want to take the chance unless I knew for sure I wasn't violating a law.

Tom Clay
Charlotte

Note: *An angler may have a gas motor on his boat, but he must not use it while fishing in Rhodes Pond.*

Ticks, Ticks and More Ticks

Just a note to thank you for a thorough, well-illustrated and important article, "Small But Alarming," by Bruce Ingram on our common tick and mosquito diseases documented in the July/August issue of *Wildlife in North Carolina*.

I well remember UNC's Coach Jim Tatum dying of Rocky Mountain spotted fever in 1959 when I was a premed student in Chapel Hill just before we began to realize the importance in this situation of beginning treatment simultaneously as we began to confirm the diagnosis. Time as much as the organism was the killer!

In the discussion on insect repellents, Bruce did not mention one of the most important topical barriers we now have, Ultrathon Cream, developed by 3M for our troops in Iran and Afghanistan to effectively combat desert varmints and insects. Ultrathon also has been proven in the Amazon where we immunized babies to polio several years ago, receiving nary a bite in mosquito ridden environments, long before the fantastic topical protection delivered by repellent-loaded nanotubes and microfiber material for field garments was perfected.

By the way, I have no personal financial interest in Ultrathon which is widely available at Wal-Mart, REI and sporting goods outlets.

C. Franklin Church, MD, FAAFP
Raleigh

I just finished your "Small But Alarming" article. I thought you did a super job in alerting outdoors people about the dangers, particularly of ticks. I was a little surprised though that you didn't mention the latest tick-borne allergy, Alpha-Gal, beginning to spread along the East Coast.

It's carried by the lone star tick and gives the receiver an allergy to meat of mammals (beef, pork, lamb, etc.), possibly for life. It shows up many months after the bite as hives, possibly anaphylactic shock, etc., normally in the middle of the night after a meal of the meat. It can be a true disaster for those who may have the reaction while camping in a remote area far from an emergency medical facility.

I'm an avocational archaeologist, and had enough bites last year to get concerned, and become the first client to be tested by a local allergist. Although she had knowledge of the condition, she had not seen a case, or tested for it at that time.

Wes Muckenfuss
Greensboro

I wish to point out a slight error on p. 33 of the July/August issue. Dave Larsen incorrectly states that permethrin originates from an African chrysanthemum. He confuses it with pyrethrum which indeed is a naturally occurring insecticide, but unfortunately has a relatively short residual.

Permethrin is a synthetic pyrethroid with a similar chemical structure and fortunately has a long residual. Otherwise an excellent article. I discovered an engorged tick on my left shoulder recently and have been on the lookout for abnormal symptoms ever since. Fortunately so far none have developed.

R. C. Hillmann, Ph.D.,
Emeritus Assoc. Professor N. C. State University
Raleigh

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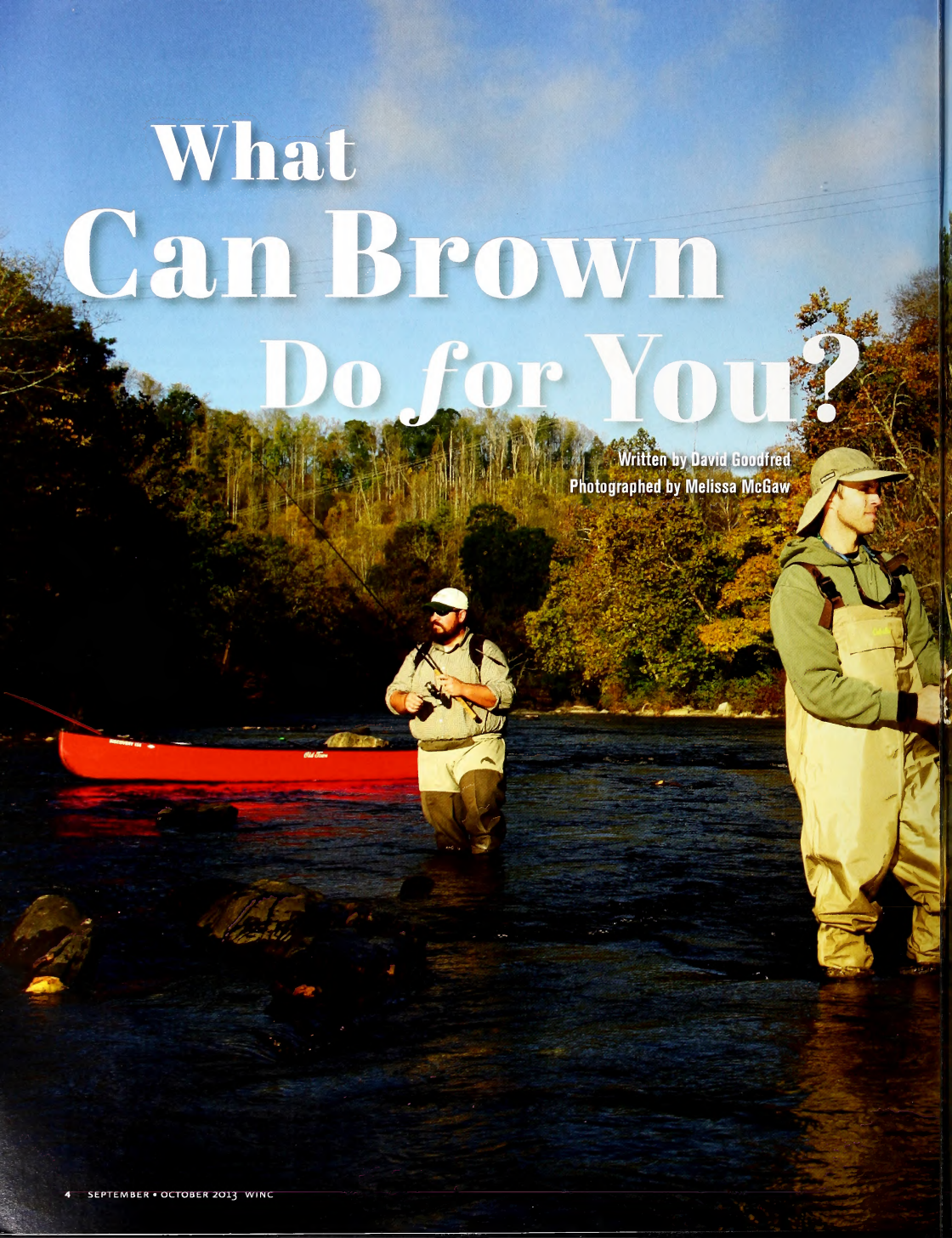
What Can Brown Do *for* You?

Written by David Goodfred

Photographed by Melissa McGaw



River Smallmouth Bass Fishing & Management in North Carolina

It's first light, and the rush of anticipation from the night before has created obvious symptoms of weariness and dry eyes. This morning's adrenaline, however, along with the singing of song birds and the lush mountain foliage helps to revive and remind you of the moment's worth.

Stepping into the cool water, you stop and look at the rocks barely visible beneath the flowing surface. At once, childhood memories of hunting crayfish in the creek come back to mind and the small grin across your face answers the silent question, "Is this where it all started?" The remembrance is shattered like glass as you look upstream. Riffle, run and pool habitats defined by flowing water (or lack thereof), shift your thoughts to the first cast of the day, knowing the brown predator you seek could be anywhere.

You survey the water and make the decision to cast your choice top-water lure into the back eddy just off the main current. Uncertain what the day might hold in terms of fishing, questions run through your mind with each cast. "Are they active?" "What are they biting today?" Suddenly the water explodes as if a large object was dropped from a nearby bridge, and between the line, pull and the pure visual stimulation of the aggressiveness just witnessed, you react in amazement and set the hook. The battle ensues as the feisty smallmouth bass begins its classic digging and drag confirming the validity of the old quote, "Inch for inch, pound for pound, this is the gamest fish that swims." Within a couple of minutes, the fish with the striking red eyes is landed, lipped, and carefully inspected for its sure bronze beauty. The angler releases the animal back to its watery home, thinking, "That was fun . . . let's do it again."

Anyone who has fished for smallmouth bass in rivers and streams can relate to this story. It's what drives the smallmouth angler each spring, summer and fall to seek the popular gamefish. As with many wild trout destinations, smallmouth bass fishing in the North Carolina foothills and mountains can provide attractive experiences of natural scenery and unrivaled fishing satisfaction. To help you enjoy the experience even more, we've put together some information on the smallmouth bass: where it can be found, the state's management emphasis on the species in North Carolina, as well as a few fishing tips on catching them.

Otoliths (inner ear bones) from fish are used to determine the age of the fish, much like the rings in a stump can date a tree. On average, it takes five to six years for a smallmouth to reach 12 inches in our state.

IDENTFICATION

The smallmouth bass is most often bronze to brownish green (hence the nicknames bronzeback or brown fish), with dark vertical bars on its sides. Unlike the largemouth bass, the smallmouth has an upper jaw that extends only to the area below the middle of its reddish eyes. Its dorsal fin has no deep notches, and three distinct dark bars radiate from around the eye.

HABITAT AND HABITS

Smallmouth bass are native to interior eastern North America (west of the Appalachians) but have been introduced elsewhere. Smallmouth bass often inhabit coolwater streams and reservoirs in the Mountains and western Piedmont areas of the state that contain diverse habitats such as logs, stumps and rock outcroppings. In streams and rivers, such habitats with current are preferred. Insects and small fish constitute the bulk diet for juvenile smallmouth bass while adults will forage on a variety of food items. Stream-dwelling smallmouths eat predominately minnows and crayfish; however, hellgrammites, salamanders and terrestrial insects are also devoured by this voracious predator.

NCWRC MANAGEMENT HISTORY

Historically, despite the smallmouth bass' current and growing popularity among river anglers nationwide, little management activity has been directed toward western North Carolina fisheries. In the 1980s and '90s, N.C. Wildlife Resources Commission (NCWRC) management efforts focused predominately on the evaluations of fingerling stocking in the Dan, Yadkin and Catawba River basins, made necessary by habitat loss or investigatory fishery manipulations. Additionally, general monitoring surveys were conducted by NCWRC biologists at the New River in Ashe and Alleghany counties in the late-1990s to mid-2000s in response to angler reports of declined fishing success.

Recognizing the need for additional information, NCWRC fisheries biologists initiated a study in 2007 to collect population data and determine smallmouth bass distribution in western North Carolina rivers and streams. A variety of sampling techniques were used, such as boat and backpack electrofishing, angling and seining gears. Primary study goals were to:

- collect smallmouth bass population data (e.g., length, weight, age and condition)
- educate anglers regarding good North Carolina smallmouth fishing destinations
- improve angler access to rivers and streams with good smallmouth bass fisheries. From 2007 to 2009, commission biologists collected over 2,800 smallmouth bass from 42 stream reaches, ranging from streams less than 25 feet wide to rivers over 500 feet wide.

All smallmouth collected were measured, weighed and analyzed for growth information. For many populations, the average-sized fish ranged from 8 to 10 inches; however, smallmouth close to 20 inches in length were observed at the Broad River (Cleveland County), Yadkin River (Surry, Yadkin, and Forsyth counties) and Nolichucky River (Mitchell and Yancey counties), indicating potential to catch large fish at select rivers. In general, while many smallmouth bass collected were less than 14 inches, fish exceeding 14 inches in length were collected from the majority of the streams surveyed. "Large" fish (greater than 17 inches) were collected from 12 percent of streams and rivers surveyed. Based on these findings, anglers targeting smallmouth bass can enjoy a variety of fishing experiences consisting of high catch rates and good quality fish depending on the river or stream frequented.

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Using small, inner ear bones called otoliths, biologists were able to determine fish age and used this information to observe the time (years) it took for smallmouth bass to reach particular lengths of interest. On average in western North Carolina rivers and streams, it takes approximately five to six years for a smallmouth bass to reach 12 inches in length. This average growth is slower than smallmouth bass populations in states such as Tennessee, Virginia and Alabama, likely due to differences in elevation, nutrient levels, geology and/or water temperature. Since fish are cold-blooded animals, feeding activity and growth are dictated by their immediate environment, especially by water temperature. Therefore, high-elevation mountain streams generally provided slower growth rates when compared to low-elevation rivers due to colder temperatures and a shortened growing season.

Although average growth rates for North Carolina smallmouth bass populations may be slower than neighboring states, individual populations reflected rapid growth rates. For example, smallmouth bass reached 12 inches in length in an average of 2.8 years at the Broad River, 3.3 years at the Yadkin River, 4.1 years at the Fisher River and 4.2 years at the Dan River. Conversely, the slowest-growing smallmouth bass population found through the study was in the Hiwassee River, where water is cooled by releases from Lake Chatuge upstream, and where it took 8.6 years for fish to reach 12 inches! The oldest fish caught was in the North Toe River was 16.2 years old and 15 inches long. Smallmouth bass older than age 10 were generally rare.

REGULATION CHANGE

Using fish length, weight and age data, biologists modeled several different fishing regulation effects on major smallmouth bass populations including those in the French Broad, North Toe/Nolichucky, Little Tennessee, Pigeon, Broad, Yadkin and Dan rivers. The model included the following harvest regulations: 10-, 12-, 14-, and 16-inch minimum-size limits and two protective slot limits (13 to 17 inches and 14 to 20 inches). Minimum-size limits are defined by the required length to a particular fish. Protective slot limits provide a range of lengths in which fish must be released; but fish can be harvested above and below the slot-limit range with the intended purpose of allowing fish to grow larger by thinning out the small fish below the slot and protecting fish within the slot. Model predictions indicated the 14-inch minimum-size limit was the best "fit" for western North Carolina river and stream smallmouth bass populations under increased angling pressure and natural mortality. As a result, fisheries managers proposed to increase the statewide minimum-size limit for smallmouth bass to 14 inches from 12 inches. This proposal was vetted through a process of internal staff, legislative and public review, and on August 1, 2012, the new 14-inch minimum-size limit for smallmouth bass became law.

Smallmouth bass are often regarded as one of the sportiest freshwater fish, known for their stamina & fighting ability.

FISHING ACCESS

Although fisheries biologists use tools such as regulations to manage fish populations, other aspects of fish management are equally important. During recent smallmouth bass surveys, NCWRC biological staff recognized the need for public access locations on many river resources. NCWRC biologists continually seek public access locations for anglers through direct ownership and/or partnerships with other government organizations, municipalities or local landowners. One successful tool used in securing public access on private lands is the signing of Memorandums of Agreement (MOAs) with landowners, allowing the NCWRC to co-manage access areas adjacent to river resources. By signing these agreements, landowners allow NCWRC biologists to access their property for fishery surveys and permit NCWRC law enforcement personnel to enforce posted Fishing Access Area (FAA) regulations at these sites, while anglers enjoy the simple benefit of accessing the river in order to fish. FAA regulations specifically prohibit the use of activities other than fishing, unless permitted by the landowner, and are posted accordingly on-site; therefore, users will receive citations by NCWRC enforcement staff if compliance to FAA regulations are not adhered to. Several MOAs have been implemented at the North Toe/Nolichucky, New and Dan rivers. These FAAs usually consist of 2- to 3-car gravel pull-offs for wade-fishing or for launching and retrieving canoes or other small portable vessels.

Please note: while many streams and rivers have public access areas, others are located on private property and public access should not be assumed. To ensure the future of fisheries located on

private property, anglers should respect landowner's rights by obtaining permission to enter the property (Landowner Protection Act: ncwildlife.org/Licensing/Regulations.aspx) and leave the area cleaner than they found it. Public access points, as well as other smallmouth bass fishing destinations can be found at: ncwildlife.org/Fishing/WheretoFish.aspx.

FISHING TECHNIQUES

Smallmouth bass are often regarded as one of the sportiest freshwater fish, known for their stamina and fighting ability. Like other basses, smallmouths may be caught using a variety of baits and methods. Although there is never a magic bait or fishing method that works at all times, general knowledge and experience of angling gear, river conditions, optimal habitats, seasons and lure presentation can consistently result in fishing success.

ANGLING GEAR

In rivers and streams, smallmouth bass generally prefer smaller lures (1/32 to 1/4 oz.); therefore, using 6- to 7-foot light to medium-heavy action rods spooled with light (4- to 10-pound test) monofilament or fluorocarbon lines may allow for increased casting distance. Additionally, many smallmouth rivers run clear under stable weather conditions; consequently, fish may become "line shy" and spook easily due to increased visibility. Anglers using light-line and finesse presentations may alleviate challenges associated with clear water, whereas increasing line size or altering line type may be more appropriate for stained or muddy water situations. Small-diameter braided lines offer the same casting efficiency as small-diameter monofilament or fluorocarbon and enhance line sensitivity and hook-setting power. Rod action may be chosen based on lure type and presentation. For example, anglers fishing with Texas-rigged soft plastic baits may opt for a long, fast-action rod for increased hook penetration, while anglers fishing exposed-hook baits such as hard jerkbaits, tube jigs or Rooster Tails may select slow- or medium-action rods, increasing flexibility (line give) to improve fish landing chances. Though gear selection is important for any fishing trip, knowledge of current river conditions can be essential for river and stream smallmouth bass fishing.

A good selection of lures is paramount for successful fishing. Downsizing is good for rivers and streams, with jigs starting at around 1/32 of an ounce. Texas-rigged plastic baits and in-line spinner baits are popular.

RIVER CONDITIONS

Before traveling to a river or stream, especially on long-distance trips, anglers should check North Carolina river conditions using the U.S. Geological Survey's website: usgs.gov/state/state.asp?State=NC. This site provides real-time water data (flow and gauge height) at select rivers across the state. Many riverine resources become very turbid after thunderstorms and other climactic events, which greatly reduces the smallmouth bass' visibility and causes the fish to alter their feeding behavior by focusing on sensation rather than sight. Consequently, fishing in muddy water can not only yield poor catch rates, turbid water can also be hazardous for navigation and wade fishing. If anglers fish in turbid or stained water conditions, bright colored lures (chartreuse, yellow, firetiger, brilliant white) with rattles (crankbaits) or vibration (spinner baits, chatterbaits, swimbaits) are recommended.

SPRING

Water clarity is a critical variable to consider when river smallmouth bass fishing. Understanding seasonal influences on fish distribution and activity may also reap benefits. During early spring months (late March–May), smallmouth bass should be targeted in prespawn holding patterns. Anglers fishing these months should particularly target stream banks (slack-water areas off the main current) during afternoon hours. These pockets provide optimal refuge during above-average flows, while facilitating conditions desired for producing and raising juvenile smallmouth bass. Popular artificial baits fished slowly during this time include spinner baits, Texas-rigged soft-plastic lures (e.g., lizards, worms, Senkos and creature baits), swim baits and jigs. Another benefit of fishing early for river smallmouth is having ample opportunity to catch larger-than-average fish. Although fish over 18 inches in length can be caught during summer months, large, prespawn females are more active and susceptible during the early spring. Consequently, many anglers wishing to catch "big" smallies should increase lure size or use live bait (e.g., hellgrammites, minnows and crayfish) to enhance their chance of landing a spring trophy.

SUMMER

By early June, smallmouth bass start concentrating in the shallow riffles (swift water with increased surface agitation) and deeper runs (flowing water with little surface agitation) within the main current, where they transition to aggressive crepuscular (early morning/late evening) feeding cycles. Small top-water lures such as buzzbaits, Spook Juniors, Pop-Rs, Torpedoes and Jitterbugs fished during this time can be highly rewarding, as anglers experience extraordinary visual strikes and drag-screaming hook sets.

Popping bugs presented by a fly rod is also a popular technique for top-water action. During late-morning and early afternoon hours, smallmouths often occupy deeper runs, especially on bright, sunny days. Anglers targeting these habitats do well using small crankbaits (e.g., crawfish, Shad Raps, etc.) soft and hard jerkbaits (e.g., flukes, Jack's worms, Rapalas, etc.), tube jigs, Texas-rigged soft plastics, Rooster Tails and curly-tail grubs. Casting upstream and retrieving these baits with the current not only presents a more natural drift but also allows the angler to fish deeper than merely reeling against the current. As water temperatures warm significantly through the "dog days" of August, smallmouth become

Slack-water areas and stream banks are reliable areas to target smallmouths in the spring during their pre-spawn phase. Lower water flows in the fall help eliminate boats from the equation and concentrate fish for wading anglers.

sluggish; therefore, anglers fishing early and late, (exercising patience during midday hours and fishing slowly in flowing water with depth), will generally produce good catches of smallies.

FALL

September through mid-October brings cooler weather resulting in decreased water temperatures and increased smallmouth activity. These months can result in phenomenal fishing for several reasons. Streams and rivers predominately are at their lowest annual flows becoming a wade fisherman's paradise; thus, canoes, kayaks and other small vessels generally are not needed to access even larger rivers. Furthermore, the low-water conditions concentrate fish in good habitats, increasing the angler's chance at catching numerous fish per location. Plus, the cooler weather brings changing fall foliage with hints of yellow, orange and red illuminating North Carolina's mountains, creating an aesthetically pleasing backdrop to any outing.

Finally, river smallmouth bass become more aggressive, as they take on an "eat before it gets too cold" feeding behavior. Much like early spring, fall fishing increases the likelihood of catching big smallies, and early spring fishing lures aforementioned can be mimicked with successful results. Anglers fishing soft-plastic baits in deep runs and eddy pockets can also experience high catch rates. As observed during early spring months, anglers fishing afternoon and evening hours in mid- to late-fall generally have the best luck. By October's end, water temperatures have cooled dramatically, and river smallmouth anglers should concentrate on fishing low-elevation, warmer resources (e.g., Broad, Yadkin, and Dan rivers) and use slow, bottom-dragging presentations such as Texas-rigged soft-plastic baits, slow-rolled spinner baits and shakey head jigs.

CONCLUSION

Throughout the years, river smallmouth bass fishing has increased nationwide. NCWRC fishery managers have responded to increased angler attention to smallies through various surveys and subsequent management actions highlighting the smallmouth bass in western North Carolina. Educational outreach efforts (ncwildlife.org/Learning/Species/Fish/SmallmouthBass.aspx) are ongoing and public access locations to benefit anglers have increased. And now, a new smallmouth bass statewide regulation has been enacted directly from river surveys. It is our hope and mission that visitors, current residents and future generations of anglers will be able to enjoy the same river smallmouth fishing experiences and opportunities afforded today. For some, the experience of navigating or wading through flowing water will always correlate to childhood memories of fishing in the creek and somehow, that connection enhances the already abundant presence of nature and tranquility that fishing for smallmouth bass in our rivers encompasses. While anglers can fish for smallmouth bass in reservoirs and lakes, it's good to remember that fishing from canoes, kayaks, or by wading in North Carolina streams and rivers can also be productive, challenging and aesthetically unmatched.

David Goodfred is a fisheries biologist with the N.C. Wildlife Resources Commission in District 8.

DOGS

THAT CAN DO IT ALL

Written by Mike Zlotnicki
Photographed by Melissa McGaw

Waterfowl, upland birds and tracking game are all in a day's work for the breeds (and people) of the North American Versatile Hunting Dog Association.

Pointing and retrieving upland birds are only part of what is expected of NAVHDA dogs. Water work and tracking are also part of the package, and the dogs are tested against a standard, not each other.

Webster's defines "versatile" as "changing or fluctuating readily; embracing a variety of subjects, fields, or skills." We see it daily in a variety of things.

Baseball has the "five-tool player," an athlete who can hit for power, hit for average, run fast, throw hard and deftly field. Cutlery has the Swiss Army Knife, a tool that can cut, file, tighten, sharpen, snip or saw. Other knives with multi-tools, like the Leatherman, take the term versatile even a step further. The hunting world has the breeds of the North American Versatile Hunting Dog Association (NAVHDA).

These dogs, mostly of continental European descent, are expected to find and retrieve game on land, find and retrieve game in water, track furred or feathered game on land and be cooperative yet independent while doing so.

My interest in bird dogs started with Jim Kjelgaard's book "Big Red" and the rest of his trilogy in grade school. "Where the Red Fern Grows" (which should be issued to every child at birth) further curried my interest in hunting dogs. While in high school one of my football coaches, Allen Johnson of Sumter, S.C., rescued a lemon-and-white pointer named Molly. I adopted Molly and we terrorized quail whenever we had the chance.

Later, after college and marriage, I bought a German shorthaired pointer from an old high school friend in Oklahoma. Kate was a big bird-finding machine, but had no interest in water work or retrieving and her disposition left a little to be desired, especially with other dogs. When we had to put her down in October of 2011, our family mourned her passing.

And I decided to get serious. While working for a newspaper, I covered a NAVHDA winter test presented by the Carolinas Chapter at Johnson Marsh Shooting Preserve and the performance of those dogs on land and in water was impressive. The thought of one dog doing it all was intriguing. I began researching breeders in earnest, which led me to Friedelsheim German shorthaired

Dr. Jesse Grimes of Garner sends his German shorthaired pointer (Deutsch kurzhaar) Della into a pond for a water retrieve. A Deutsch kurzhaar is a German shorthaired pointer that is registered with the Deutsch Kurzhaar Verband in Germany and is tested to that breed club's standards. Opposite page, Vivian Wiese-Hansen of Raleigh, her German shorthair Tucker, and Scott Caldwell of Lillington discuss upland bird training during a Carolinas Chapter training day.

pointers (GSPs) in Maryland. I'd been visiting the website for a while and the site's photo galleries displayed a nice mix of upland and waterfowl hunts. It was apparent that a lot of thought went into the breeding program to produce versatile dogs. Photos also showed dogs interacting with the breeder's children. As the father of three girls, sound temperament in a dog was paramount, even more than conformation or drive.

When an announcement of a planned breeding was posted I contacted Donnie Ebersole, the owner. Several lengthy emails and phone conversations ensued, and about six months later my wife, Renee, and I drove home with Friedelsheim's Tar Heel Annie. We quickly joined the Carolinas Chapter and learned that training dogs—and training dog owners—were the primary focuses of the Chapter. We also found out that the membership is as varied as the breeds owned.

The Professor

Jesse Grimes of Garner is one of the founding members of the Carolinas Chapter and has served in just about every position offered by the club. He helped found the chapter after answering an advertisement in a newspaper placed by the late Roy Thillberg of Charlotte, searching for people interested in starting one. That was in 1995, and Grimes, a poultry professor at N.C. State University, has been active ever since.

Growing up in Scotland Neck, Grimes was around bird dogs but hunted rabbits with beagles. He owned a springer spaniel in 1990 while in college and then a Deutsch drahthaar named Sally. Since then, he's owned a smorgasbord of mostly continental breeds—pointers, a French Brittany spaniel, two German wirehairs and a Deutsch kurzaar.

Grimes personifies the majority of NAVHDA members. "My purpose in joining NAVHDA was to develop my dogs for hunting," he said. "The testing process is a journey for me. It tells me where I am in my training. NAVHDA is also for breeders to evaluate their breeding processes for each breed. The testing started with breeders. Now, it's as much a handlers' club."

The Soldier

Master Sergeant Scott Caldwell grew up with Labrador retrievers and "flushing" Brittany spaniels in upstate New York but is a relative newcomer to NAVHDA. "Back in the 1996–97 time frame I returned from deployment and my family bought me a guided preserve hunt with Tony Wooley at Cow Run Farms in Candor," said Caldwell, who is assigned to Special Operations Command at Fort Bragg. "That was truly the first time I actually hunted over versatile pointing dogs for upland game. I was just amazed. They were German shorthairs. I won't say they were perfectly trained, now that I'm older and have worked around other dogs. But I didn't realize a dog could be trained to that level."

Within a year, Caldwell had purchased a shorthair named Ruger that would break ice

to retrieve mallards in the morning and then work guided upland hunts the rest of the day. Eventually his work with Ruger would lead to training puppies and then to breeding shorthairs. Two years ago Caldwell purchased an 80-acre spread outside of Lillington that serves as the chapter's training grounds, where monthly informal training days are held. A large pond allows for water work and fields are used for upland and tracking work. A lot of training, especially while the dogs are young, is in simple obedience, lacking in many gun dogs. For some members this is their first versatile dog and questions abound.

"The gamekeepers in Europe wanted a true versatile dog that could do blood trailing and upland as well as water," he said. They bred and tested their dogs according to specific guidelines in Europe and the European testing is very strict. With that as a base, I think that NAVHDA has brought that strict testing to our society. If you look at our average weekend hunter, I'd say about 85 percent don't have the time or money to have a Lab to retrieve ducks, an English pointer to hunt birds and a beagle to hunt rabbits or other small game. For a guy like me, NAVHDA offers how to train a dog."

Caldwell said that as a breeder and trainer, people would often purchase a puppy and say, "now what?" Caldwell would say "bring it back to me" or recommend a trainer. The Carolinas Chapter offers a third option.

The Dietitian

Not all chapter members are hunters. Vivian Wiese-Hansen, who works for the N.C. Dept of Health and Human Services as a nutrition program consultant, is a native of Quebec, Canada. She grew up with a father who favored Brittanys in the field. A cousin gave her Gina, a 7-year-old shorthair, in 2007. When Gina passed away she told herself "I will have another shorthair." And into her life came Tucker, a ball of energy from field trial stock in Washington. "Strong drive, longer range and smart as a whip," she says of Tucker. "Very headstrong and covers a lot of ground."

"Quite a bit of it is basic obedience, but you also have to understand and be able to read your dog so you'll know how to correct your dog..."

There was a fairly steep learning curve for Wiese-Hansen as an owner, but lots of walks and runs and training helped.

"I've had a lot of fun and I wouldn't have traded these past two years for anything," she said, citing the chapter and Tucker for the experience. "I've had so much fun learning about my dog, what his potential is and helping him learn what to do, teaching him. But it's also a learning process for me because I didn't know anything about training a hunting dog. Quite a bit of it is basic obedience, but you also have to understand and be able to read your dog so you'll know how to correct your dog and know what is going to work. Having a dog and NAVDHA go hand-in-hand."

Wiese-Hansen said that a welcome offshoot of the monthly training days is how the chapter became a support group, which spawned a sense of belonging and friendship. The social aspect is appealing; folks of all types brought together through their dogs.

When Tucker was 10 weeks old, Wiese-Hansen met with Caldwell and formed a partnership with him; Caldwell teaching Wiese-Hansen while Wiese-Hansen was training Tucker. Caldwell would later handle Tucker

Above: Kevin Perez of Raleigh gets a kiss from his Weimaraner after hydrating the dog during the upland portion of its Utility test. Right, the author steadies his puppy Annie on point during a monthly NAVHDA training day.

to a NAVHDA Natural Ability Prize I. Wiese-Hansen now has enough experience to partner with other Chapter members for weekend training sessions as she readies Tucker for his Utility Test in December.

Getting There

Our Annie proved to be a precocious pup, full of drive and intelligence. You get what you pay for in breeding. Some of the training, like the upland work, was quite familiar, but some, like tracking, was not. I asked Grimes (one of the chapter's founders) about it and he suggested dragging a hot dog on a string to get her started. In only two hot dogs she was tracking nose on the ground. The little hints and tips from chapter members can make the training side so much easier. As she progressed I was sure the Natural Ability test was in the bag and I expected a Prize I. I mean, a dog only has to swim, hunt and point, and track, right? Even at a young 7 months I thought she'd breeze through it. But as I learned, there are training days and there are testing days.

Our test morning opened with Annie lacerating her gum and scraping her chest on a metal pole when I took her out to exercise. She should have been on a leash. Rookie mistake. There were 10 puppies in her Natural Ability group, and we were No. 10 in the order. We started with upland work and she seemed to sense it was "go time," shaking off her soreness and carving up the bird field with nice quartering while garnering solid points. Some of the continental breeds are more methodical in the field than pointers or setters, but Annie is not a plodder. A small gallery followed us along with three judges. She aced the upland test. Next was swimming and she hesitated at first to go in after the rubber bumper. I glanced back at the gallery and my wife had her hands covering her face. That's never good. Annie eventually swam to the judges' satisfaction and also "passed" her coat and teeth exam. We broke for lunch and I had a chance to talk to one of the senior judges, Mark Whalen of Poolesville, Md.

"We want to see a dog do well; we want dogs to pass," he said between spoonfuls of chili. "But, we don't give out a NAVHDA prize like a Christmas present. A dog has to earn it.

A Utility [prize] dog should be able to waterfowl hunt in the morning, upland hunt in the afternoon and track a wounded deer the next morning."

He went on to explain some of the Utility tests like the Duck Search, in which a dog is expected to independently swim and search up to 400 yards away for a duck that can't be seen and can get no help from the handler after being sent. In NAVHDA, silence is golden. "We want the dogs to use this," Whalen said, tapping his nose.

After lunch was the pheasant track, when a pheasant is released to run away and the dog is brought to the release site to track. Annie had tracked hot dogs, dead ducks and live pheasants and I had a fair amount of confidence in her. But this was test day, and sure enough, she lost the track after 30 yards or so and when re-sent, couldn't get any further. At the end of her time I leashed her and we made our way back to Caldwell, where the handlers and guests gathered a little nervously to await the public announcement of prizes. As fate would have it, Annie had perfect scores until the pheasant track where she lost enough points to knock her back to a Prize II (although her 108 points out of a 112 would normally be a Prize I). Good enough for me at 7 months and hobbled some with minor injuries. Now we're looking toward Utility.

I didn't get a "bird dog" because I'm fooling myself about great upland hunting in North Carolina. But I love pointing breeds in general and shorthairs in particular. With grouse in the mountains, woodcock and snipe in the Piedmont, some quail Down East and the dove fields and duck swamps, one can parse together seven months of wing shooting in this state with a versatile dog. As much as I loved my two dogs before Annie, I didn't do them any favors on the training side. They were more like "sporks" than Swiss Army Knives. I want a canine Victorinox. A do-it-all dog. And with the help of the Carolinas Chapter of the North American Versatile Hunting Dog Association, good genes and some determination, we'll get there.

Mike Zlotnicki is the associate editor of Wildlife in North Carolina. *He may be reached at 919-707-0175 or mike.zlotnicki@ncwildlife.org.*

NAVHDA TESTS

In 1969, NAVHDA established a system of comprehensive tests that truly measure all aspects of work for the versatile hunting dog breeds. The trialing systems in use in North America before this time were established for specialists. The NAVHDA system provides for testing at various stages of maturity. Performance records are kept and made available through our Test Information Service since they provide invaluable information for both breeder and buyer alike.

NAVHDA chapters sponsor four kinds of tests:

The Natural Ability Test which is designed to evaluate the inherent natural abilities of young dogs and gain insight into their possible usefulness as versatile gun dogs. It rates seven important inherited abilities: nose, search, tracking, pointing, water, desire and cooperation.

The Utility Preparatory Test measures the dogs' development midway through their training toward the Utility Test.

The Utility Test evaluates trained dogs in water and field, before and after the shot, as finished versatile hunting companions as well as many other specific tasks.

The Invitational Test is the highest level of testing. Only dogs who have achieved a Prize I in Utility are eligible. This limits the entry to exceptional animals who have demonstrated a high level of training and tests their skills in the advanced work.

To be truly meaningful, tests for versatile hunting dogs must meet certain criteria. They must be conducted in an environment which reflects actual hunting conditions and situations. They must test the important qualities of a good versatile dog. Judges must be knowledgeable, consistent and objective. All testing and evaluation is to be within the context of judging dogs as useful, productive hunting companions. NAVHDA tests have been designed with these requirements in mind. In addition, record keeping provides an accurate, complete performance evaluation on each dog tested. The results of these tests for specific breeds are available through the Test Information Service.

In order to eliminate direct competition between dogs, entrants in a NAVHDA test are judged one at a time, by three judges, with their performance scored against a standard. The only exception to this is the Invitational Test, in which dogs are braced (paired) in the field so each dog can demonstrate his willingness to back (honor another's point) and work effectively with another dog. Prizes are awarded on the basis of numerical scores achieved in the test. Each dog that meets or exceeds minimum standards in all areas of work is placed in one of three categories: Prize I, II or III. Prize I being the highest classification. If all dogs entered in a NAVHDA test perform well, all can receive a prize.

Source: navhda.org

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BREEDS OF THE CAROLINAS CHAPTER

Since 1969 more than 40,000 dogs have been tested in NAVHDA hunt tests. The German shorthaired pointer has accounted for 39.6 percent of dogs tested, followed by the German wirehaired pointer at 18.9 percent. The wirehaired pointing griffon is third at 9.9 percent. The rest of the top 10 are pudelpointer (6.2), small Munsterlander (4.3), Brittany spaniel (4), spinone (3.6), Vizsla (3.1) Weimaraner (2.9) and large Munsterlander (2.7).

1. German Shorthaired Pointer
The origin of the German shorthaired pointer is not clear, but the source of the breed seems to have been the German bird dog, related to the old Spanish pointer, and various crossings with local German scent hounds and track and trail dogs. When the Germans introduced the English pointers to lend elegance to the German shorthaired pointer prototype, the result was a utility dog that combined sporting virtue with clean lines, good looks and sound temperament. (American Kennel Club) Males, measured at the withers, 23 to 25 inches and 55 to 70 pounds. Females 21 to 23 inches. Weight 45 to 60 pounds. (German Shorthaired Pointer Club of America)

2. German Wirehaired Pointer
Most of the early wirehaired pointers represented a combination of griffon, stichelhaar (both mixtures of pointer, foxhound, pudelpointer, and Polish water dog), Pudelpointer (a cross of poodle and pointer) and German shorthair. The Germans continued to breed the distinctive traits of pointer, foxhound, and poodle until they had created what is today the German wirehair, a constitutionally tough, courageous breed which points and retrieves equally well on land and in water. (AKC) Males from 24 to 26 inches, and 55 to 70 pounds. Females smaller, but not less than 22 inches, and 45 to 60 pounds. (United Kennel Club)

3. Wirehaired Pointing Griffon
Griffon-like dogs have existed throughout history, but exact origins are uncertain. The modern history of the breed, however, has been well documented. Dutchman Eduard Korthals was an avid hunter and desired a dog that could hunt over a variety of terrain, so he developed a breeding program to create a versatile new sporting breed. In less than two decades, Korthals had fixed the new breed he called the wirehaired pointing griffon, wrote the standard and formed a griffon club. The "griff" is easy to train and devoted to family and has a friendly temperament. (AKC) Height range for males is 21½ to 23½ inches. Height range for females is 19½ to 21½ inches. (UKC)

4. Weimaraner
Originally known as the Weimar pointer (derived from the court that sponsored the breed), the Weimaraner is a product of selective German breeding and comes from the same general stock as other German hunting breeds. It is believed to be a descendant of the bloodhound and was originally used to hunt wolves, deer and bear. Over the years because of the rarity of bigger game in his surroundings, the Weimaraner adapted to become a bird dog and personal hunting companion. (AKC) Males, 25 to 27 inches; females, 23 to 25 inches. (Weimaraner Club of North America)

5. Spinone Italiano
The spinone Italiano, or Italian pointer, is Italy's all-purpose hunting dog. The dog is a pointer of the old school, that is, a rather slow-footed dog similar to those used before the era of wing shooting. It is estimated to be a cross of coarse-haired Italian setters, bred with those left by Greek traders and others from the Adriatic coast, in addition to crosses with the white mastiff and perhaps French griffons. An excellent retriever by nature and an experienced hunter on any terrain, the spinone is robust, sociable and docile. spinones range in size from 22 to 27 inches tall at the shoulder. (AKC)

6. Bracco Italiano
The bracco Italiano is one of only two native Italian gundog breeds, the other being the Spinone, and they both belong to the Hunt, Point and Retrieve Group of dogs. The bracco is a classic and ancient breed, with paintings and writings about it dating back to the fourth and fifth centuries B.C., and is considered an antecedent of many of today's modern sporting dogs, more specifically European pointing breeds. The bracco Italiano originated in Italy and is believed in most circles to be a cross between either a segugio Italiano (a coursing hound), or sighthounds brought to Italy by Phoenician traders from Egypt, and the Asiatic mastiff or Molossus. The bracco ranges in height from 21.5 to 26.5 inches and weighs from 55 to 88 pounds. (Bracco Club of America)

7. Pudelpointer
The first cross of the pudel and an English pointer to establish the new breed took place in Germany in 1881. The sire was "Tell," an English pointer belonging to Kaiser Frederick III, the dam was a German hunting pudel bitch "Molly," owned by Hegewald, a famous Teutonic author on the subject of hunting dogs.

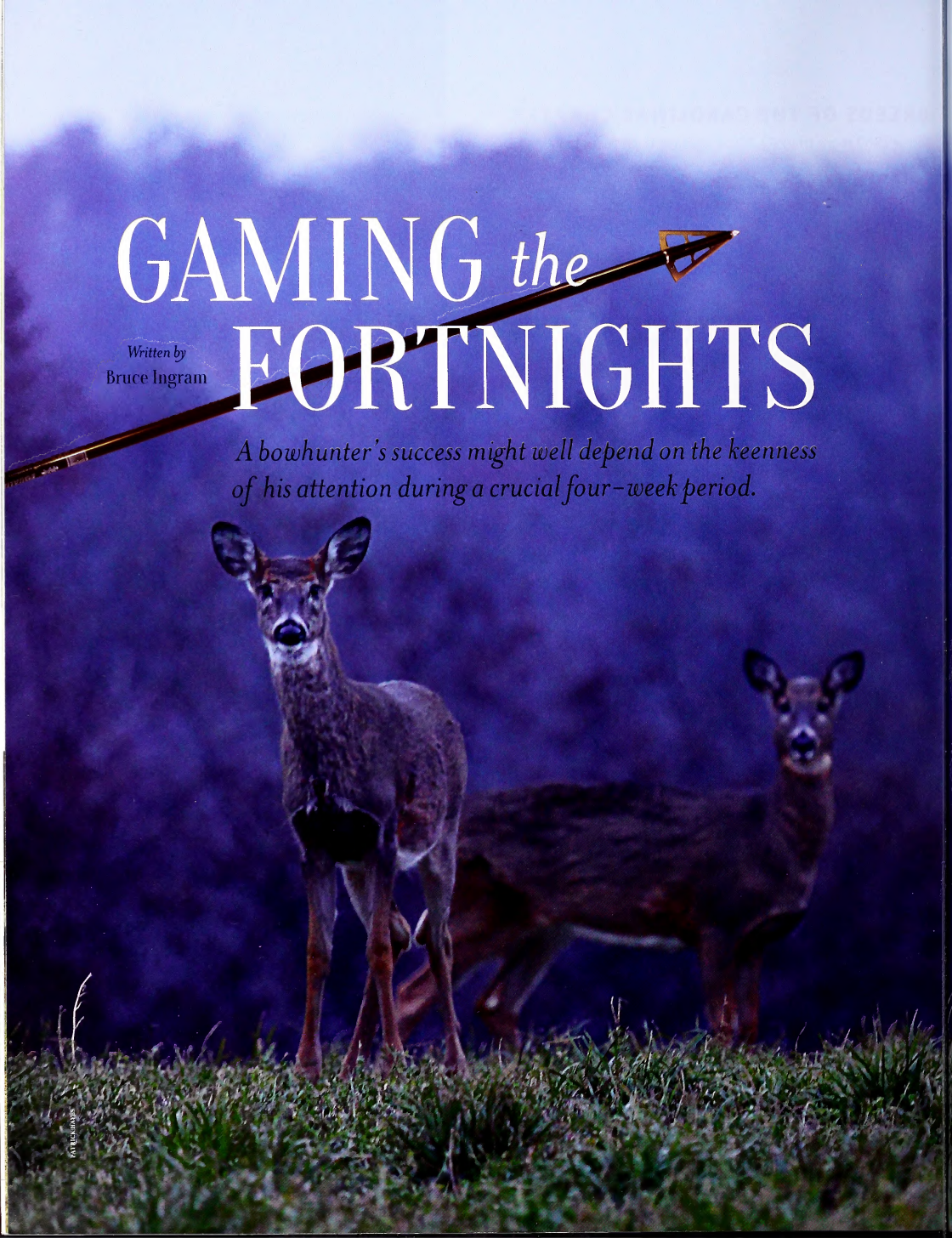
The idea behind this breeding was to combine the outstanding natural working abilities of the two great specialists in one dog: The intelligence, water love, retrieving instinct, easy trainability and willingness to please, wrapped into the protective coat of the Pudel with the unending desire to hunt, birdiness, pointing instinct, field nose and endurance of the English pointer.

Since the pudel proved to be the stronger breed in passing its genes, many more pointers were introduced into the breeding program to arrive at the breed, as it is known today. During the first 30 years, only 11 pudels were used against well over 80 pointers. From then on, only occasional re-introductions of pointers were undertaken, especially after the two World Wars severely depleted the breeding stock. (Pudelpointer Club of North America) Pudelpointers are usually 22 to 25 inches in height; females are usually 50 to 60 pounds, males 60 to 70.

GAMING *the* FORTNIGHTS

Written by
Bruce Ingram

A bowhunter's success might well depend on the keenness of his attention during a crucial four-week period.



FOTOLIA.COM

Opening day of North Carolina's bow season is equivalent to a national holiday for the state's archery enthusiasts. But to experience success on that day, bowhunters need to have a game plan in place before the season commences. Some sportsmen enjoy scouting all summer, glassing fields and viewing images from trail cameras. But in reality, the information gained from the fortnight before the opener will largely determine success or failure the first two weeks of the season.

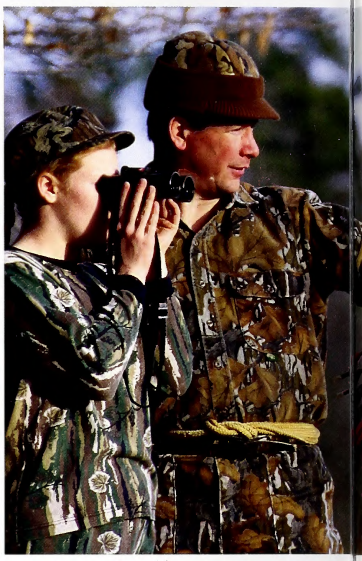
Brad Gunn, a biologist with the N.C. Wildlife Resources Commission, said that it's wise for bowhunters to look for more than one stand site on multiple properties during those 14 days leading up to the season.

"Typically in North Carolina, deer habits abruptly change from summer to the time the bow season begins," he said. "The deer often switch from feeding in fields to feeding in woods when such soft mast foods as grapes and hard mast foods like acorns start to appear. A hot spot for viewing deer in August may well not be one for seeing deer on opening day.

"That's a major reason why bowhunters should build in some flexibility concerning their stand selections. Just before the season begins, hunters should visit oak groves and search the ground for acorns, and use binoculars to scan for acorns in the trees. Remember that every year the amount of acorns present is likely to have changed from what it was the previous fall. A late frost, for example, could have played havoc with acorn production in a certain woodlot."

And check frequently. The food sources that draw deer the first two weeks of the season often fluctuate dramatically. "A bowhunter could think that he has patterned the deer because just before the season began they were feeding, say, in a field or food plot," Gunn said. "Then all of a sudden, the season begins and the deer have moved on, perhaps to an oak flat that has just

Preseason scouting for hard and soft mast sources like wild grapes, below, help bowhunters know where to place stands. Binoculars aid in low-impact scouting by limiting scent distribution in the field while observing movement and feeding patterns.



KEN TAYLOR/NCWRC

started dropping acorns. That's why it's so important to be familiar with all potential deer foods and to gain that knowledge in the preseason."

Low Impact Preseason Scouting

A major part of my preseason scouting regimen is to enter and leave potential feeding areas when deer are not likely to be present. That's why I try to conduct all of my scouting the fortnight before opening day and between 11 a.m. and 2 p.m., which is likely to be one of the hottest times of the day and when the deer are relatively far away in bedding areas.

The primary deer sign I search for is droppings, especially scat that is of varying ages, indicating that deer have been using an area for quite some time and are likely to continue doing so. At this time of year, I don't really focus on such buck calling cards as rubs and scrapes, which only indicate that deer have utilized an area in the past. I mentally file this info, though, under the title "interesting," meaning I will have to further check on the site's potential when the season has actually commenced.

As Gunn said, locating hard and soft mast food items is crucial, but for archers, so is finding just the right tree for a stand. For example, this past September, a landowner, who is an avid gun hunter, gave me permission to hunt his 24-acre tract and even said I could use his ladder stand for my initial outing. That Monday evening I saw deer all right, but they were all 60 yards distant, well out of the 20-yard range I have established for my Mathews Switchback compound. The ladder stand was obviously well situated for a gun hunter like the landowner but ill-suited for bow hunters.

Two evenings later I arrived early at the woodlot and walked to where I had observed deer strolling through the area on Monday. The first tree I found that was positioned within 20 yards of the deer trail was a red maple, a species that, because of its slick bark, is not ideal for a hanging stand. The second tree I visited was a Northern red oak, but it had too many small white pines crowding it, which meant that viable shooting lanes did not exist.

Then I checked out a scarlet oak, which was dripping acorns, but its trunk was too crooked to serve as a stand site. Finally, I found a white oak that was within 15 yards of the main trail, featured an abundance of acorns at its base and that grew within a small clearing with numerous shooting lanes. I then quickly secured my stand 12 feet high in the white oak.

Around 6:50 p.m., two deer meandered through the area, perhaps the same ones that were there Monday, periodically stopping to munch acorns. When the lead doe's head became obscured by a tree, I drew. And when she stepped out from behind the tree, I released an arrow. The blood trail was abundant and easy to follow, and I soon claimed my first deer of the season. I believe that it almost always pays to spend extra time to find just the right tree from which to hang a stand.

Rotating Stand Sites

I spend a great deal of time renewing hunting permission or gaining access to new places to hunt, plus checking out potential stand sites on public lands. That way I can rotate sites, so as to not overhunt any of them. And I can take advantage of prevailing winds, and current food sources. Gunn offered an interesting anecdote on this topic.

"In some cases, rotating stand sites makes a lot of difference, especially early in the season," he said. "Many people hunt after work, they have to rush to their stands, and they perspire a lot and leave a lot of scent in an area. This is a recipe for spooking deer, so it makes good sense to have alternative places to go. And any stand where the wind is wrong on a particular day is usually not going to be a good place to hunt."

"On the other hand, one year my wife and I hunted from the same stand on the same day. I killed a deer in the morning and she hunted there in the afternoon. She killed a deer that evening when it literally crossed over the blood trail made by the deer I killed. This obviously was one of those cases where not rotating a stand site didn't make any difference."

"Still," continued Gunn, "does, and certainly trophy bucks, can become alarmed when we repeatedly hunt an area. To avoid this situation, I strive to have multiple stand sites on multiple properties. I know this is not possible with bowhunters who may be restricted to just a few properties and/or public land. But I do believe that the courteous sportsman, who takes the time to court landowners well in advance of the season and promises to follow all of the landowner's rules, can accumulate a number of places to go afield. I especially believe that rotating stand

MELISSA McGAW/NCWRC

sites the first fortnight of the season is crucial, as the hotter weather and our resultant perspiration will combine to make it easier for deer to pattern and thus avoid us."

Morning or Evening Stand Site? Or Both?

Archers should also decide which stand sites are best for morning, evening and all day hunting. Bob Errett, who operates Parker Bows, had an interesting way of addressing this.

"If you can't decide whether a food source is drawing deer in the morning or evening, then look for places that are funnels between feeding and bedding areas and you're in good shape regardless of the time of day," he said. "For example, one of my favorite stand sites is located in a woodlot at the edge of a field. Every morning, the deer walk through a low spot in that field next to a pond. Then they walk up a hill and enter the woods through a gap in the fence line. My ladder stand is in oak just 12 or so yards from that fence-line break.

"The deer bed is in a thicket about 100 yards from that fence line. Every evening they come out of the thicket and go back into the field at that same break in the fence. And I'm there waiting for them in the evening as well."

Of course, some sites like this one are equally good in the morning and evening — again the advantage of hunting a funnel — while others are only fetching at certain times of the day. Generally a good rule to follow is for bowhunters to hunt deeper in the woods in the morning and closer to fields in the evening. I also agree with Errett that generally, funnels will be more consistent places to hunt than food sources.

An All-Season Stand Site?

Finally, bowhunters should also decide whether a stand site is good for all season hunting or just the early season. Precious few stands are productive throughout North Carolina's long deer season.

For example, one of the best early season stand sites I have ever hunted in North Carolina is one positioned in a mixed white and red oak flat on a mountainside in Alleghany County. Adding to the appeal is that a clearcut exists about 100 yards distant up the mountain. The clearcut is just far enough away that the stealthy archer can reach it without alarming bedded whitetails, but close enough that a late arising deer in the evening will have enough time to come by before the end of shooting light.

In September, if the acorn crop has been bounteous or even just fair, whitetails are likely to stroll through at any time of the day. Indeed, I have observed as many as five deer descending onto the flat at the same time.

The oak mountainside, however, is virtually worthless as a place for archers by November, unless the acorn crop has been exceptional. The flat is too open and too far from thick cover for a deer to feel secure feeding there except at night.

A superlative example of an all-season stand site lies in a funnel where I have killed four deer the past five times I have hunted there — and should have tagged a doe there the fifth time, but that's another story. The funnel contains a number of mature white and red oaks, lies halfway between a deep, steep hollow on its south side and an overgrown field on its north and halfway between bedding areas toward its east and west. Every deer in the area, it seems, moseys by that stand site every day throughout the various seasons.

The fortnight before the season begins and the fortnight after it commences are outstanding times for bowhunters to prepare for a successful start to a successful season. Make sure you're ready for it.

Bruce Ingram has written five books on river smallmouth fishing, including one on the New River and "Fly and Spin Fishing for River Smallmouths." For more information and to read his weekly outdoors blog, visit bruceingramoutdoors.com.

MELISSA McGAW/NCWRC

White oak acorns are a preferred forage item for white-tailed deer.

North Carolina Hunting Seasons 2013–2014

SPECIES		HUNTING SEASON	DAILY LIMIT	POSSESSION	SEASON
BLACK BEAR		See *Regulations Digest, P. 45*	1	1	1
DEER[1]			6	6[2]	6[2]
	Archery	Sept. 7–Sept. 27 (Eastern) Sept. 9–Sept. 28 and Oct. 14–Nov. 23 (Western) Sept. 7–Nov. 1 (Central) Sept. 7–Nov. 8 (Northwestern)			
	Muzzleloading	Sept. 28–Oct. 11 (Eastern) Sept. 30–Oct. 12 (Western) Nov. 2–Nov. 15 (Central) Nov. 9–Nov. 22 (Northwestern)			
	Gun	Oct. 12–Jan. 1 (Eastern) Nov. 25–Dec. 14 (Western) Nov. 16–Jan. 1 (Central) Nov. 23–Jan. 1 (Northwestern)			
	Urban Archery Season	Jan. 11–Feb. 15	See *Regulations Digest P. 55*		
WILD TURKEY	Male Or Bearded Only Youth Hunt (Male Or Bearded Only)	April 12–May 10 April 5–April 11	1 1	2 *(Annual bag limit is 2 wild turkeys, only one of which may be taken during youth week.)*	2
EARLY CANADA GOOSE SEASON		Sept. 2–Sept. 30[3]	15	45	None
DOVE	(Mourning & White-winged)	Sept. 2–Oct. 5 (shooting hours are ½ hour before sunrise until sunset) Nov. 25–Nov. 30 Dec. 13–Jan. 11	15	45	None

SPECIES		HUNTING SEASON	DAILY LIMIT	POSSESSION	SEASON
RAILS, MOORHEN & GALLINULE	Moorhen & Gallinule	Sept. 7–Sept. 28 Oct. 5–Nov. 21	15	45	None
	Clapper Rail, King Rail	Sept. 7–Sept. 28 Oct. 5–Nov. 21	15	45	None
	Sora Rail, Virginia Rail	Sept. 7–Sept. 28 Oct. 5–Nov. 21	25	75	None
EARLY TEAL SEASON[4]		Sept. 7–Sept. 25 (east of U.S. 17 only)	6	18	None
COMMON SNIPE		Nov. 14–Feb. 28	8	24	None
WOODCOCK		Dec. 12–Jan. 25	3	9	None
RED & GRAY SQUIRREL		Oct. 14–Feb. 28	8	None	None
FOX SQUIRREL		Oct. 14–Dec. 31 (only in 27 counties; season closed elsewhere; see *Regulations Digest*, P. 57)	1	2	10
RABBIT Including Box Trapping		Nov. 23–Feb. 28	5	None	None
QUAIL		Nov. 23–Feb. 28	6	12	None
RUFFED GROUSE		Oct. 14–Feb. 28	3	6	30
PHEASANT Male Pheasant Only		Nov. 16–Feb. 1	3	6	30
RACCOON & OPOSSUM		Oct.14 (sunrise)–Feb. 28	No restriction on opossum; see *Regulations Digest*, P. 57, for raccoon		
BOBCAT		Oct. 14–Feb. 28	No restriction		
FOX		Nov. 16–Jan. 1 and Jan. 4–Jan. 25	Limited to certain counties, see *Regulations Digest*, P. 57		
MIGRATORY WATERFOWL		Federal regulations may be obtained at ncwildlife.org or by calling toll free 1-800-675-0263 after Labor Day			
COYOTE[5]		No closed season or bag limits. Electronic calls allowed			
GROUNDHOG		No closed season or bag limits			
NUTRIA		No closed season or bag limits			
BEAVER		See *Regulations Digest*, P. 58			
CROW		Wed., Fri., Sat. of each week from Aug. 2, 2013 through Feb. 28, 2014 and June 4, 2014 through July 31, 2014. See *Regulations Digest*, P. 59, for additional holiday hunts. No bag limits			
STRIPED SKUNK		No closed season or bag limits			
ARMADILLO		No closed season or bag limits			
FERAL SWINE		No closed season or bag limits			

[1] See *2013–2014 North Carolina Inland Fishing, Hunting & Trapping Regulations Digest* for approximate boundaries of Eastern, Central, Northwestern and Western deer seasons. For a copy of the *Regulations Digest*, write: N.C. Wildlife Resources Commission, 1722 Mail Service Center, Raleigh, NC 27699-1722 or visit ncwildlife.org.

[2] See *Regulations Digest* P. 55 for buck bag limits.

[3] West of U.S. 17, shooting hours are extended to one-half hour after sunset, and electronic calls and unplugged shotguns may be used.

[4] Includes blue-winged, green-winged and cinnamon teal.

[5] Visit ncwildlife.org for updates on hunting coyotes at night.

More Than a Brand

As I waited for my morning quail hunters, an old man walked into the clubhouse at Wintergreen Preserve and sat down. "What a beautiful morning," he said. He folded his faded khaki coat across the sofa and slowly bent forward to adjust his boots. Outside, a fragile layer of frost shimmered in the early light.

"Yes sir," I replied. I recognized the shotgun resting against his knee.

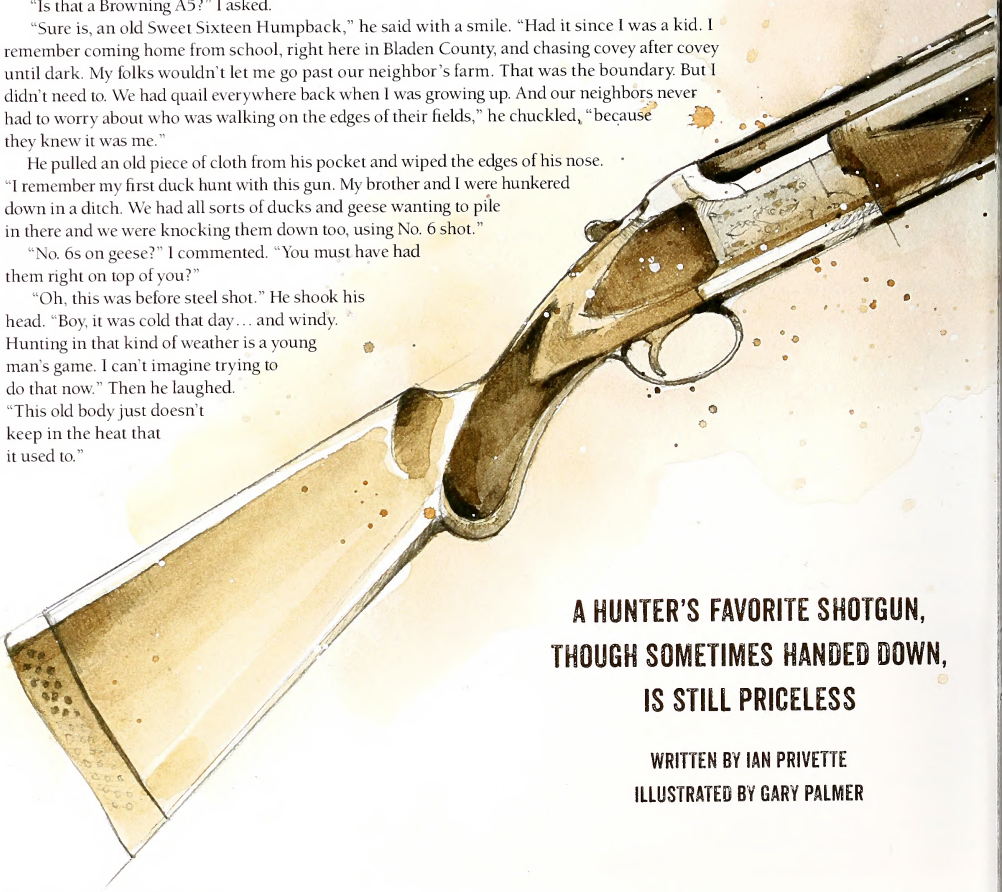
"Is that a Browning A5?" I asked.

"Sure is, an old Sweet Sixteen Humpback," he said with a smile. "Had it since I was a kid. I remember coming home from school, right here in Bladen County, and chasing covey after covey until dark. My folks wouldn't let me go past our neighbor's farm. That was the boundary. But I didn't need to. We had quail everywhere back when I was growing up. And our neighbors never had to worry about who was walking on the edges of their fields," he chuckled, "because they knew it was me."

He pulled an old piece of cloth from his pocket and wiped the edges of his nose. "I remember my first duck hunt with this gun. My brother and I were hunkered down in a ditch. We had all sorts of ducks and geese wanting to pile in there and we were knocking them down too, using No. 6 shot."

"No. 6s on geese?" I commented. "You must have had them right on top of you?"

"Oh, this was before steel shot." He shook his head. "Boy, it was cold that day… and windy. Hunting in that kind of weather is a young man's game. I can't imagine trying to do that now." Then he laughed. "This old body just doesn't keep in the heat that it used to."



A HUNTER'S FAVORITE SHOTGUN, THOUGH SOMETIMES HANDED DOWN, IS STILL PRICELESS

WRITTEN BY IAN PRIVETTE
ILLUSTRATED BY GARY PALMER

I knew just enough about Humpbacks to ask where it was made.

"Belgium," he answered. "It was passed down to me from an uncle who fought and died in the War. I've had to change out a few O-rings, but it still cycles 2 3/4 loads like a charm."

I had already started to grin when I heard the word "uncle."

UNCLES, BOONDOGGIES AND BIRD DOGS My Uncle Doug never fought in a war. For the most part, he grew up in Wilmington. He fished. He surfed. And, at 6-foot-8, he drove around in a little VW Bug. My parents often joke about how he once unknowingly cut off someone driving through town. The infuriated driver promptly signaled for my uncle to pull over, presumably to be held physically accountable for the offensive maneuver. Confused about the little man's current state of frenzy, my uncle slowly unfolded himself from his tiny car, expecting some sort of roadside emergency.

He calmly demanded, "What's the problem here?"

Baffled that someone so big could fit in such a small car, the angry driver quickly assessed the difference in size, retreated back to his own car and drove off. My father was sitting in the front seat and just laughed.

"You cut that guy off. He was ready to whoop your . . . " my father exclaimed.

"Oh well, I would have apologized but he just drove off," Doug said.

My father and Doug married sisters. And I suspect a large part of Uncle Doug's initial exposure to birds and dogs was a ploy by my father to get them out of the house during the holidays. Year after year, I heard the same stories from my father and Doug about their outdoor adventures. Tales of epic days of ducks on the Meherrin River and countless fish from unnamed mountain streams, not unlike the memories of the old man at the clubhouse. They were all stories that became embedded in our family lore.

My personal favorites were the most elaborate and misfortunate ones, fondly known as "boondoggles." They were always told with good humor; it just took a while for the good humor to be appreciated. A boondoggle usually started off as something that sounded like a good idea. For example, "Let's drive three hours and hunt ducks on the Pamlico Sound."

Next, a trivial and overlooked detail, such as an unchecked drain plug in the boat or an odd clank in the engine, would spiral into an event just short of a catastrophe, such as a failed boat launch. Rarely was there any severe damage or physical harm—a broken fan belt, flat tire or burnt bearing. However, my father claims he suffered a minor concussion due to an errant decoy anchor flung in the dark marshes of Pamlico Point.

My father recollects that before he blacked out, he saw Doug swinging a knotted cluster of decoys and weights over his head like a primitive set of bolas, followed by a soft helicopter sound whizzing through the air. When my father came to, Doug was none the wiser. It was dark. And my father was too stunned to speak up.

Ultimately, each trip would end with a fruitless day afield and a colossal waste of time. As my father and uncle grew older and a bit wiser, they would just turn around and drive home, whenever either one of them sensed the beginnings of a boondoggle.

My uncle never had any children. He had retrievers and bird dogs, which was probably why his hair remained brown while my father's turned gray early. First, there were golden retrievers—Amber and then Toddy. Jake, his first of many Brittanys, followed. In the early 1990s, Doug carried on a casual correspondence with Mr. John Edwards of Goldsboro, a breeder who had been developing his line of Brittanys in North Carolina since 1959. A last-minute cancellation allowed my uncle to take a home a 9-week-old female puppy, Brandy. A year later, he brought home another one, Dan. For the next 20 years, a brace of bird dogs slept on the couch in Doug's den. And like most children, and most good bird dogs for that matter, all of Doug's dogs had weird quirks about them; Dan and Brandy would beg to sleep in his van the night before a hunt.

I grew up hunting over Dan and Brandy in Bladen County, using hand-me-down hunting clothes and borrowed shotguns. My first hunts were with a Stevens 20-gauge side-by-side, a ragged, oversized orange vest and rubber boots that climbed past my knees. All previously worn by my older brother. Add a puffed-up orange hat and I gave a convincing portrayal of Elmer Fudd.

Once I proved that I could shoot better than I looked, Doug was eager for me to try out some of his shotguns from his gun cabinet. I quickly became attached to an old 20-gauge

over-and-under. For some reason, it fit me, more so than my clothes. And it felt good. I shot my first double on quail with that gun. After one of our last hunts together, my uncle commented, "Maybe one of these days, I'll hand that gun down to you, if your brother doesn't speak for it first."

THE CERTAINTIES OF LIFE Death and taxes: the two things certain in life. During our last season together, Doug had been plagued with back problems. True to the character of the kind of bird hunter he was, he said, "I'll take care of it after bird season is over." The following spring, a series of tests and x-rays revealed tumors, and then biopsies revealed widespread cancer.

Three weeks later, he was gone. Just like that. On April 15th.

Uncle Doug was my mentor, and he left me with a wealth of outdoor memories. Even more importantly, we had become friends. Some of his ashes are buried in a church courtyard, the church where Doug married my aunt and where my father met my mother. The remainder of his ashes were scattered throughout some of his favorite haunts and coverts, all in familiar places with familiar stories. After the funeral, a collage of pictures was on display in the dining room of his house. Off to one side sat a picture of Toddy, patiently waiting next to an old Belgium-made Model A5.

THE HISTORIES OF HAND-ME-DOWN GUNS There is something in the tradition of handing down old guns that keeps the memory of a person and a history of the land alive. Somehow, the pieces of wood and cold metal take on a character and warmth, becoming more than just an extension of good shooting mechanics. They hold a story and a perspective larger than the hunters themselves. And like all aspects of good character, it takes a lifetime to make before it is passed on.

The old man at the clubhouse stood up, tightened his suspenders and retrieved his khaki coat by the corduroy collar. "A great gun," he said. "My son has been hounding me for it, for years. But I'm not quite ready to give it up yet." He smiled.

I have shot the same borrowed 20-gauge over-and-under for most my life, passed down to me from an uncle. I doubt I will ever shoot another shotgun.

In the fall and winter, Ian Privette is a hunting guide in southeastern North Carolina. In the summer, he guides for trout in Montana.

DR. ROY CAMPBELL

CAROLINA THUMB-SPLITTERS

WITH KILLER LEGS AND EYES TO DIE FOR, THE ROUGH MANTIS SHRIMP CAN BE A TOUGH CUSTOMER FOR THE UNWARY

WRITTEN BY JOHN COOPER

Some time ago, Keith Ashley, biologist with the N.C. Wildlife Resources Commission, came into my office toting a plastic bag leaking water. "This was caught on hook-and-line below the mouth of the Cape Fear River," he said. Being fairly certain that he didn't mean some enterprising fisherman had hooked a plastic bag, I looked inside. Encased in a chunk of melting ice was a weird, 5-inch crustacean that somewhat resembled a praying mantis on steroids.

Keith then gave me a map showing the approximate location of the catch, which was a bit northeast of Fort Caswell, Brunswick County. In my lab, I thawed the beast and saw that it was one of the mantis shrimps of the family Squillidae. The common name is not particularly apt, since they are neither mantis nor shrimp. Technically, they belong to a large group of crustaceans known as stomatopods.

DR. ROY CAMPBELL

The mantis shrimp is neither a mantis nor a shrimp, but it folds its prey-catching legs under its body like a terrestrial preying mantis. Those legs can draw blood from your finger, and they can strike 50 times faster than you can blink your eye.

NATURE'S WAYS

How Can Mantis Shrimp Strike So Fast?

See Nature's Ways, page 43.

This name means "mouth foot," and pertains to the position of their large, prey-catching second legs, which are conveniently close to the mouth. But, semantics aside, further examination established the identity of this one as the rough mantis shrimp, Squilla empusa, which occurs in murky, intertidal waters of the Atlantic coast from Cape Cod to the Gulf of Mexico. It lives in burrows in mud and under rocks, usually at depths less than 40 meters (130 feet), but occasionally as deep as 150 meters (490 feet), and is fairly common in the coastal waters of North Carolina.

And, as in the case of Keith's specimen, mantis shrimp are sometimes caught by fishermen when the shrimp tries to steal baits. They've even been known to attack lures. Not unexpectedly, they often wind up entwined in nets designed to catch fish, crabs, and real shrimp, especially bottom dredges or trawls. And this can be a nasty experience for anyone who tries to disentangle one by hand. Here's why.

Mantis shrimp owe their name to the fact that their second legs are modified as powerful claws, which, when not in use, are folded like the immense front legs of a praying mantis. Sort of like spring-loaded jack-knives just waiting to be sprung. In Squilla empusa, these claws are used like scalpels to stab or cut through prey, which includes fish and other soft-bodied animals, and even other shrimp. The end section of these slicers contains an array of six really impressive spines. And, if that's not bad enough news for their prey, just behind each deadly claw is a long segment of leg with a serrated row of knifelike little teeth that make it look (and feel) like a mini saw blade.

Obviously, mantis shrimps are awesome predators. Their slashing movement takes less than eight milliseconds, which is 50 times faster than you can blink your eye. The strike can reach a speed of 16 feet per second and, as anyone who has ever carelessly handled a live mantis shrimp knows, they can slice your skin and muscle as easily as that of a fish. Thus, their colorful common name, "thumb-splitter."

Unfortunately for mantis shrimp, their Ninja weaponry can't do much to protect them from larger predators. Adults are part of the normal diet for quite a few other creatures, including skates, rays, sharks, red snappers, other fish and squid, and their floating larvae are heavily preyed upon by smaller creatures. Some fishermen make customized lures, most notably flies that mimic mantis shrimp and are successful at fooling some types of gamefish. The shrimp are not especially relished as human food in the United States, however, and there are no commercial fisheries that target them in the Carolinas. Elsewhere, though, notably in the Orient where there are hundreds of different species, they are an important food crop. Japanese sushi menus list them as "shaku" and "gazaebi."

THEIR EYES ARE PROBABLY THE MOST UNBELIEVABLY COMPLEX EYES IN THE ENTIRE ANIMAL KINGDOM, AND THE VISION THEY PROVIDE IS UNPARALLELED.

And speaking of those Oriental mantis shrimp, most of them use a different strategy for capturing their prey. Instead of having spines and saws on their outsize second legs, they have a hardened, enlarged joint that is used like a pile-driver to knock their prey senseless. They can hit so hard and so fast that it's difficult to keep them in ordinary aquaria, since a blow from them just shatters the glass. The wallop has been compared to that of a .22 bullet.

Their fantastic weaponry is not the only amazing thing about stomatopods, though. Their eyes are probably the most unbelievably complex eyes in the entire animal kingdom, and the vision they provide is unparalleled. Each eye is situated on a long stalk, and each moves independently of the other. Now, there's nothing too amazing about that, since quite a few invertebrates have stalked eyes that function independently, sort of like periscopes, to increase their visual field. So, what makes the stomatopod visual system so unique? Well, for openers, each eye is divided into two parts, so that each has binocular vision and can achieve depth perception independent of the other. In humans, binocular vision requires both eyes to be focused on the same object. Mantis shrimp, therefore, can have an in-depth, 3-D look at the entire world all around them, in every direction.

And what a world it must be. Because, while our eyes have only three basic visual pigments, i.e. those for detecting red, blue, and yellow, the mantis shrimp eye has as many as 16 such pigments. And its visual range, unlike ours, actually includes light in ultraviolet and infrared wave-lengths. As if all that weren't stupendous enough, mantis shrimps can also see polarized light. To quote Dr. Olivia Judson of Imperial College, London: "Forget the eye of the hawk; it's the eye of the mantis shrimp that should be legendary." Not to mention those killer legs.

John Cooper is the research curator of crustaceans for the N.C. Museum of Natural Sciences.

Early Birds

Written by Mike Marsh

Once experimental, September and October duck seasons are today's traditions.

Waterfowlers have taken advantage of the early teal season in September since 1998. This year it runs Sept. 8 to 26, east of Hwy. 17 only. Opposite, a green-winged teal.

WHEN I FIRST BEGAN HUNTING WATERFOWL, North Carolina had a traditional duck season that stretched across a single swath of time. Over the four decades since, there have been many changes. Bag limits have risen and fallen, as have populations of various species of ducks, and seasons have shortened and lengthened. What was once a single season has expanded into three segments, plus a special season that is outside the framework of the regular duck season.

Hunters refer to the Special September Teal season and the first split of duck season as the "early seasons." That first split began as a three- or four-day season in October. Although any legal duck could be harvested during the season, its intent was to take advantage of wood ducks that hatched within the state or moved through during an early migration. The second was a season in September to take advantage of teal that move through the state before heading to other places. Due to their migration chronology, blue-winged teal were not being subjected to harvest during the regular waterfowl season in the United States, therefore special September seasons were established to provide additional hunting opportunity. Harvest of green-winged teal was included due to the difficulty for hunters in identifying blue-winged vs. green-winged teal.

The October split began in 1974, despite arguments from hunters and biologists in the northern portions of the Atlantic Flyway who believed the season adversely impacted wood ducks hatched "up north." North Carolina hunters helped defend the fledgling season by taking blood samples with syringes from the hearts of harvested wood ducks. The blood was analyzed for the presence of a parasite specific to northern wood ducks. The research revealed that only a small portion of the October wood duck harvest came from outside the state, and that most of those ducks were yearling drakes. Based in part on that evidence, the USFWS allowed that segment of the season to continue until today, but at the cost of a reduction to the regular-season wood duck bag limit.

The upshot is that the October season remains intact statewide, running four days in October. A few years ago, the wood duck bag limit increased from two to three birds for all three segments of duck season. Based upon the current level of harvest, the increased bag limit appears to be sustainable over time.

GARY BURKE

The September teal season
opened as an experimental season primarily to gauge impact to non-target ducks.

The current September teal season is restricted to areas east of U.S. Highway 17 in North Carolina and takes place from Sept. 7–25. The season began as a 9-day experimental season in 1998, with a bag limit of four green-winged, blue-winged and cinnamon teal in aggregate.

Louisiana had requested the USFWS to allow an early teal season in 1957. The first experimental season opened in some states in the Central and Mississippi flyways in 1965. Then the season closed in 1968 because of an unexpectedly large harvest of green-winged teal and non-teal duck species, as well as to allow time to analyze data from the experimental season. The season reopened and was gradually extended eastward and southward until, finally, in 1998, an experimental nine-day September teal season opened in Delaware, Georgia, Maryland, North Carolina, Pennsylvania, South Carolina, Virginia and West Virginia.

Field observers during the first year discovered North Carolina hunters were not as adept at identifying teal as they should have been. Observers included biologists and N.C. Wildlife Resources Commission enforcement officers in "spy blinds" located at commission waterfowl impoundments. The take of non-teal species to teal was higher than a predetermined acceptable ratio. As a result, the state almost lost an operational September teal season. However, better education and enforcement remedied the situation and Delaware, Maryland, Virginia, Georgia and North Carolina went operational in 2001, with Pennsylvania and West Virginia opting out. In 2009, Atlantic Flyway states were allowed to hold a 16-day teal season when the breeding population estimate for blue-winged teal is greater than 4.7 million birds. Should the estimate fall below 4.7 million, we would return to a nine-day season.

Unlike the October split of duck season, which allows the harvest of any legal duck species, the special September season only allows the harvest of teal. This season is also limited geographically, while the October split is open statewide. Therefore, it is intuitive that fewer hunters take advantage of the teal season. However, even Joe Fuller, the commission's migratory game bird coordinator and an avid waterfowl hunter, said that judging hunter participation in the teal season is difficult.

"We don't have good estimates for participation," Fuller said. "On our statewide waterfowl hunter survey conducted in 2011, we asked hunters if they had participated in the early teal season anytime in the last five years. Nineteen percent of respondents indicated that they had participated. Based on either the state or the federal hunter estimates, this would suggest that between 4,000 and 6,700 hunters had participated sometime in the previous five years, but that doesn't mean that many participated each year. We also don't know how many days, on average, people go hunting during the season. My own perception is that there is a fairly low participation. Federal harvest estimates suggest that on average about 1,000 teal are harvested each year. I think that's probably a little high, but maybe not."

The September teal season opened as an experimental season primarily to gauge impact to non-target ducks. However, with no adverse impacts evident to teal or other waterfowl, the September teal season is well established, taking its place among all the other duck hunting seasons.

For those who are passionate about waterfowl hunting, these early opportunities are an exciting addition to the "regular" season. They offer the chance to check out boats, decoys and blinds, as well as to tune up retrievers and shooting abilities, long before the longer seasons arrive.

Excuses to avoid participation largely center on competition from other types of hunting. Rail and dove seasons are open, as well as the resident Canada goose season. The deer archery season and muzzleloader season can also be big draws.

The first wood duck I harvested during the initial October split was the culmination of a three-day hunt. I lived in the Piedmont on a large lake, and the road to my house crossed the dam of a small pond. While wood ducks were scarce on the lake itself, I watched a flock of wood ducks fly out of the creek mouth that entered the pond every evening, crossing the pond before heading elsewhere along the lake to roost.

By the third day of watching them, I had the ducks patterned. After obtaining permission to hunt the pond, I waited at its head near the feeder creek with a double-barreled shotgun. Right on cue, a flock of seven wood ducks flew out of the creek and crossed the pond. The first shot drew feathers, and the second was an apparent miss.

I searched until past dark for the duck, but did not find it until the next morning as I was driving along the pond dike on my way to work. The duck had fallen in the road, about 100 yards from the

GONEPADDLING/123RF STOCK PHOTO

In addition to the early teal-only season in September, North Carolina duck hunters enjoy a short "early" October season, which runs this year from the 3rd to the 6th. All legal ducks, mergansers and coots are available for harvest then. Below, biologists band more than 200,000 ducks and nearly 150,000 geese and swans in North America each year. Recovered data helps them learn about migration routes and harvest estimates.

MIKE MARSH

MIKE MARSH

pond. I was so excited at finding the duck I mounted the gorgeous drake as a memento of the hunt. As I skinned the bird, I discovered more than a dozen white oak acorns in its crop, which had intercepted several pellets while the bird was flying toward me. A single lethal pellet had struck the bird from behind. Little did I know that first wood duck jumpstarted what would become a 40-year tradition.

The first year the teal season opened, I headed to Pamlico Point for an opening-day hunt. Flashlight beams waving in the darkness revealed that many other hunters had the same hunt planned. When the opening moment arrived, thousands of teal took flight. Hunters fired from all points of the compass, keeping the birds airborne for at least an hour. The hunt was more akin to a dove hunt than a duck hunt, but every hunter I spoke with had happily harvested his four-teal limit. Most of them were blue-winged teal, but there were a few green-winged teal in their bags.

While most hunters have places where they can hunt wood ducks, finding places to hunt September teal is more challenging. Add in the mosquitoes, biting gnats and flies, not to say the presence of alligators that pose a threat to retrieving dogs, and a teal hunt can be much more daunting than pass-shooting or float-hunting wood ducks.

Teal may be anywhere, or they may be nowhere. Even for biologists, timing the specific dates of the teal season is little more than a guess, so it's a good thing it was extended from the original nine days to 16. A tropical weather event can push them right out of the state and, sometimes, the migration peak just doesn't occur during the hunting season.

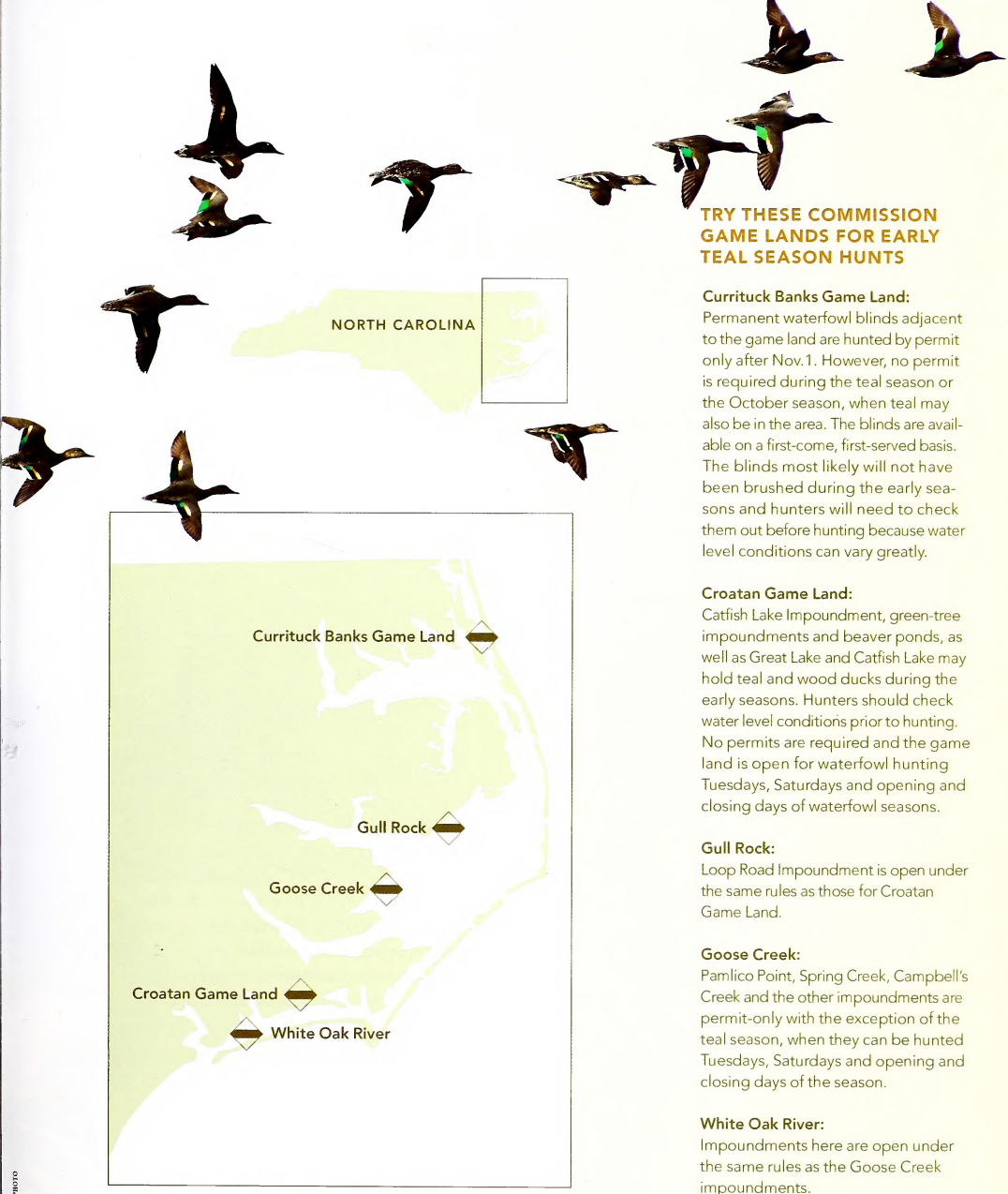
However, September teal are not very astute, making them suckers for decoys set in front of a boat camouflaged with nothing more than swatches of tobacco netting or clumps of reeds. You may want to go to the trouble of brushing a blind or decking out your trusty duck boat, but you don't have to.

The early seasons have undergone a complete metamorphosis. They are no longer experimental or controversial. They are traditional. You may not be out there just to bag a few teal. But I will. ◆

Wilmington writer Mike Marsh is a frequent contributor to Wildlife in North Carolina.

Blue-winged teal, below, and green-winged teal are the most common teals for Tar Heel hunters. They are smaller ducks that fly in tight flocks and are very good table fare.

STEVE MLADENOFF/NORTH CAROLINA PHOTO



RCK93/123RF STOCK PHOTO

TRY THESE COMMISSION GAME LANDS FOR EARLY TEAL SEASON HUNTS

Currituck Banks Game Land:
Permanent waterfowl blinds adjacent to the game land are hunted by permit only after Nov. 1. However, no permit is required during the teal season or the October season, when teal may also be in the area. The blinds are available on a first-come, first-served basis. The blinds most likely will not have been brushed during the early seasons and hunters will need to check them out before hunting because water level conditions can vary greatly.

Croatan Game Land:
Catfish Lake Impoundment, green-tree impoundments and beaver ponds, as well as Great Lake and Catfish Lake may hold teal and wood ducks during the early seasons. Hunters should check water level conditions prior to hunting. No permits are required and the game land is open for waterfowl hunting Tuesdays, Saturdays and opening and closing days of waterfowl seasons.

Gull Rock:
Loop Road Impoundment is open under the same rules as those for Croatan Game Land.

Goose Creek:
Pamlico Point, Spring Creek, Campbell's Creek and the other impoundments are permit-only with the exception of the teal season, when they can be hunted Tuesdays, Saturdays and opening and closing days of the season.

White Oak River:
Impoundments here are open under the same rules as the Goose Creek impoundments.

North Carolina's high mountains are more than scenic; they represent unique natural communities. For the plants and animals living there, it's

The High Life

written by Jeff Beane
illustrations and nature activity by Anne M. Runyon

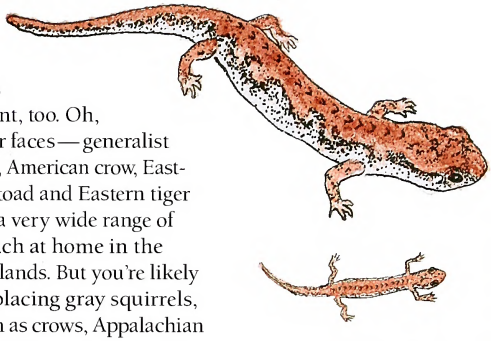
It's been said that a drive from North Carolina's foothills to its highest mountain peaks is like a trip from Georgia to Canada. Small changes in elevation are equal to many miles of latitudinal change. At about 5,500 feet above sea level, the "Canadian Life Zone" begins, featuring climate, habitats and species comparable to those in central Canada. North Carolina has many peaks over 5,500 feet, and over 40 that exceed 6,000 feet. Up there, life is different.

fraser fir

HIGH GROWING PLANTS

Aside from colder temperatures, the most readily noticeable differences in high-elevation communities are the plant components. At about 4,500 feet, hardwoods begin to give way to boreal forests dominated by red spruce. At about 5,500 feet, Fraser fir becomes about equally abundant, and at 6,000 feet it becomes the dominant tree. No wonder the great ecologist B. W. Wells called North Carolina's high mountains "Christmas Tree Land." Eastern and Carolina hemlock, and a few hardwood trees, like mountain ash, yellow birch, fire cherry and mountain maple, also make it into some of the high country. Shrubs include Catawba and Carolina rhododendron, mountain fetterbush, sand myrtle, minniebush and mountain elder. Among the numerous herbaceous plants you won't see in the flatlands are mountain woodfern, mountain bluets, mountain wood sorrel, whorled wood aster, bluebead lily, and mountain avens. Mosses and liverworts, like stairstep moss and knight's-plume moss, are also common.

Catawba rhododendron



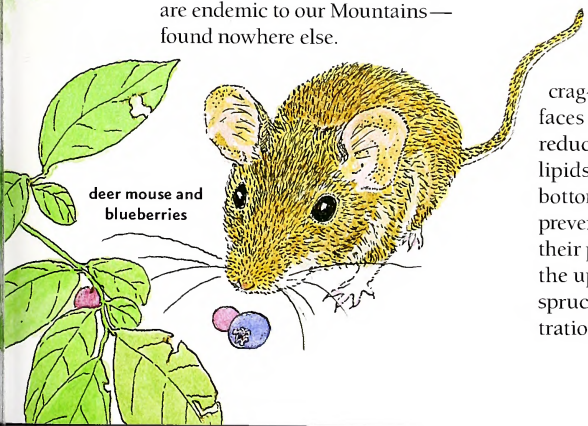
pigmy salamander — life size

WILD NOTEBOOK

Among North Carolina's smallest vertebrate species are the two pigmy salamanders (pigmy salamander south of the French Broad River; northern pigmy salamander north of the river). Only recently recognized as separate species, both live only in spruce-fir and high-elevation hardwood forests.

HIGH LIVING ANIMALS

The animals are different, too. Oh, you'll see some familiar faces — generalist species like the raccoon, American crow, Eastern towhee, American toad and Eastern tiger swallowtail can live in a very wide range of habitats and are as much at home in the high country as the flatlands. But you're likely to see red squirrels replacing gray squirrels, common ravens as often as crows, Appalachian cottontails substituted for Eastern cottontails, coal skinks instead of five-lined skinks, deer mice edging out white-footed mice, Appalachian brook trout in place of sunfish, hairy-tailed moles filling in for Eastern moles and wood frogs rather than leopard frogs. Birds familiar only as winter residents in most of the state, like the dark-eyed junco, hermit thrush, golden-crowned kinglet, brown creeper and yellow-bellied sapsucker, nest in the boreal forests. You'll also see some species not found elsewhere in the state, like ruffed grouse, black-capped chickadee, golden-winged warbler and alder flycatcher. Heat-loving reptiles are generally scarce at higher elevations, but the Eastern garter snake, ringneck snake and timber rattlesnake make their way to the highest peaks. Salamanders are as abundant in the North Carolina Mountains as they are anywhere else on earth, and some species, including Weller's, Jordan's, imitator, and the two pigmy salamander species, live only at higher elevations. At least three salamanders are endemic to our Mountains — found nowhere else.



deer mouse and blueberries

COPING WITH COLD

Our high mountains are harsh places to live, with high winds, low temperatures and heavy precipitation. The highest peaks can receive up to 100 inches of snow per year, and in 1985 the state record low temperature of 34 degrees below zero (Fahrenheit) was recorded on Mount Mitchell.

High-elevation creatures need special adaptations and strategies to cope with these extreme environments. Amphibians produce antifreeze in their blood. Ruffed grouse and saw-whet owls have dense feathers on their feet. Jumping mice, groundhogs and bats lower their metabolism and hibernate through the cold months. So do most reptiles and insects. Chipmunks store food to help tide them through the winter. Small mammals that don't hibernate, like the rock shrew and least weasel; and small birds like chickadees and kinglets, must eat constantly throughout the winter to fuel their tiny furnaces. Several species of rock tripe and reindeer lichen, moss species like Appalachian haircap moss, and some vascular plants like Michaux's saxifrage and crag-jangle, can eke out a living on cold, bare rock faces or in rock crevices. Conifer needles have reduced surface area, a waxy cuticle and special lipids in their cells to protect them from cold. The bottom-heavy shapes of many conifers help prevent their being blown over by high winds, and their pointy tops keep snow from accumulating in the upper branches. The layered branches of spruces, firs and hemlocks also allow light penetration while letting wind pass through easily.

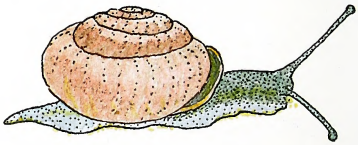
HARD TIMES FOR HIGHLANDERS

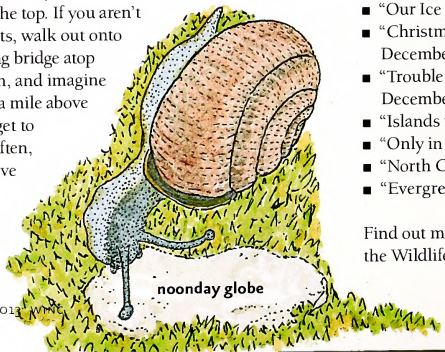
High places aren't necessarily safe places. Our remaining high-elevation habitats, even those protected as parks or other public lands, are threatened by acid precipitation and other pollution, by introduced species like the balsam and hemlock woolly adelgids, and by climate change. If our climate warms by only a few degrees, we stand to lose many species dependent on boreal forests. Plants and animals that now exist only on mountain peaks have nowhere left to retreat to in the face of climate change. Some, like the Northern flying squirrel, least weasel and Appalachian cottontail, could disappear from our state but continue to survive elsewhere. But for others, like the spruce-fir moss spider; pink-shell azalea; noonday globe; fragile glyph; Heller's blazing star; Bluff Mountain reindeer lichen; Plott Balsam sideswimmer; and Jordan's, crevice, Blue Ridge gray-cheeked and Cheoah Bald salamanders, there is no elsewhere—they will survive in the Carolina high country or not at all. And when they are gone from the world, what a mountain of a loss that will be.

spruce-fir moss spider

Get Outside

If you live in western North Carolina, you have lots of high places to visit. If you don't, visit the Mountains when you can. Great Smoky Mountains National Park and Pisgah and Nantahala National Forests have many miles of hiking trails where you can enjoy the high life. State parks in the Mountains include Mount Mitchell, Grandfather Mountain, Mount Jefferson, New River, Gorges, Chimney Rock and Stone Mountain. The Blue Ridge Parkway provides access to numerous high peaks and scenic overlooks. Take a slow ride along the Parkway and notice how the habitats change with elevation. Stop and take a high mountain hike. What plants and animals do you see here that you have never seen in the flatlands? What adaptations do they have that enable them to live here? Photograph or sketch ones that you can't identify. How many unfamiliar bird songs can you hear? Mount Mitchell, the highest peak in the eastern U.S., is an elevational experience you'll not want to miss, and it's easy to get to the top. If you aren't too bothered by heights, walk out onto the mile-high swinging bridge atop Grandfather Mountain, and imagine living your whole life a mile above sea level. If you can't get to Mountains easily, or often, visit the Mountain Cove exhibit at the North Carolina Museum of Natural Sciences in Raleigh.





noonday globe

Read and Find Out

- "The Natural Gardens of North Carolina" by B. W. Wells, University of North Carolina Press 1937, 1967.
- "Highroad Guide to the North Carolina Mountains" by Lynda McDaniel, Longstreet, 1998.
- "Hollows, Peepers, and Highlanders: An Appalachian Mountain Ecology, 2nd Edition" by George Constantz, West Virginia University Press, 2004.

In *Wildlife in North Carolina*

- "Our Mile-High Forests" by Duane Raver, January 1980.
- "Our Ice Age Relics" by Lawrence S. Earley, May 1982.
- "Christmas Tree Land" by Lawrence S. Earley, December 1984.
- "Trouble on Mount Mitchell" by Lawrence S. Earley, December 1984.
- "Islands in the Sky" by Lawrence S. Earley, April 1987.
- "Only in the Mountains" by Terry Krautwurst, July 2001.
- "North Carolina's Own" by Jeff Beane, November 2008.
- "Evergreen Forests" by Jeff Beane, December 2008.

Find out more about Project WILD Workshops and literature at the Wildlife Commission's website at ncwildlife.org

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MBIND

Make a Saw-whet Owl Mask

1) Copy owl face onto cardstock. (For a larger mask, copy at 115%.)

2) Cut out owl face along the thick black lines.

3) Cut two slits into forehead along the thick black lines.

4) Cut up thick black line to beak.

5) Cut along both sides of beak following the thick black lines.

6) Pinch down along the two dotted lines above the eyes, sculpting eyebrows

7) Pinch down along dotted line in center of beak.

8) To sculpt the forehead, overlap each of the slits and glue down.
For the chin, overlap the slit under beak and glue down.

9) Cut out the black pupils in the eyes, if you wish to wear the mask.
Punch holes on sides, attach string or ribbon and your saw-whet owl mask is ready to wear.

back porch

NEWS and NOTES

Edited by Mike Zlotnicki

Hunting Heritage Apprentice Permit Opens Doors

MELISSA McGAW/NCWRC

MIKE ZLOTNICKI/NCWRC

Left, At Neuse Sports Shop in Kinston, Kinston Mayor B.J. Murphy, state Rep. John Bell and store CEO Russell Rhodes joined Col. Dale Caveny and Chief Deputy Director Mallory Martin to accept a prototype campaign poster.

Above, At Spring Hill Outfitters in Selma, store general manager Scott Brandon joined state Sen. Buck Newton at a special news event to announce the Hunting Heritage Apprentice Permit campaign.

Car dealers encourage potential buyers to test drive a car before purchasing. It allows the product to sell itself. Conservation in North Carolina now has a similar program thanks to the Hunting Heritage Apprentice Permit. The N.C. Wildlife Resources Commission began issuing permits July 1.

"In essence, a new hunter can sample before they purchase. The Hunting Heritage Apprentice Permit makes it possible to try hunting if accompanied by a licensed hunter or a license-exempt landowner, before committing to a comprehensive hunter education course," said Col. Dale Caveny, chief of the commission's Division of Law Enforcement. "The apprentice must be within sight and hearing distance of the mentor without aid of electronic devices or enhancement. I know that mentors will provide a tailor-made safety message before hand and advice once the hunt begins, while leading by example."

The commission unveiled the program at three eastern outdoors stores on June 14. At Springhill Outfitters in Selma, Sen E.S. "Buck" Newton-R, of Wilson, was in attendance.

"It's a wonderful program," said Newton, who counts deer and turkey hunting among his favorite pursuits. "I look forward to seeing how it enhances the sport. If I were coming along today I would be a perfect candidate for the permit. I didn't start hunting until after college and I had a friend and mentored under him."

Brandon Scott, owner of Springhill, said, "The Hunter Apprentice Permit will certainly encourage more citizens to enjoy Mother Nature here in North Carolina. By giving people a chance to participate in something they've never experienced it should spark their interest even more, and to take hunter education classes and be even more informed."

At the Neuse Sports Shop local media gathered to hear what CEO Russell Rhodes had to say about the new program.

"This reduces a barrier to entry," he said. Now they have an opportunity to 'try before they buy.' We think this is a good balance of safety first and a lowering of boundaries." Rep. John Bell-R, of Goldsboro, one of the co-sponsors of the bill, was also in attendance. He grew up deer hunting with his father in Duplin and Wayne counties and had a "big picture" view of the permit.

"The recent popularity of reality TV shows like "Mountain Men" and "Duck Dynasty" have sparked the interest in hunting among young people and people from metropolitan areas," he said. "It was a great bipartisan bill where both sides of the aisle saw the value in it. The House and Senate understood the value of getting people off the couch and in the woods."

Rep. Bell said that credit should go to co-sponsor Rep. Tim Moffit of Buncombe County for spearheading the bill.

The final stop of the day was at EZ Bait & Tackle in Goldsboro, one of the Commission's almost 900 service agents. Owner Gary Bevell spoke of how the program now extends to the whole family the privilege that previously existed only to youths. With some 260,000 licensed hunters over the age of 16 in our state, there's a big window of opportunity to take a friend afield.

In Raleigh, Travis Casper, head of hunter education for the Commission, spoke to the value of the new program and its importance to hunter recruitment.

"Apprentice permits have been successfully implemented in other states without a significant increase in hunting-related injuries," he said. "We must be more efficient and effective in getting more people engaged in safe and enjoyable experiences with our wildlife resources, to foster support for all conservation issues."

A New Pier on the Cape Fear

JODIE OWEN/NCWRC

The N.C. Wildlife Resources Commission recently completed construction of a universally accessible fishing pier that runs along the Cape Fear River at Lock and Dam No. 1 in Bladen County near Riegelwood.

The wooden pier extends 30 feet out and is 90 feet wide across the T-section. The pier was designed and constructed by staff with the commission's Division of Engineering and Lands Management. Unlike many of the piers constructed by the commission, the pier at Lock and Dam No. 1 is a fixed pier with driven pilings so that it can withstand high-water events typical on the Cape Fear River.

The pier coincides with the construction of a rock arch ramp—or fish passage way that is expected to improve passage of anadromous fish such as striped bass, American shad, river herring and sturgeon, during their spring migrations upriver to reach historical spawning grounds.

"This is a site that we have been interested in for years," said Tom Rachels, a fisheries biologist with the commission. "The construction of the rock arch ramp provided a great opportunity to expand our collaboration with the Army Corps of Engineers and build a fishing pier for anglers who do not have a boat."

While the commission built the pier, the Corps of Engineers now owns it and will maintain it. Pier construction was funded through the Sport Fish Restoration Program, which utilizes state fishing license money and funds generated from taxes on fishing tackle and other fishing-related expenditures.

January 2014 Public Hearings Schedule

Proposed changes in wildlife and fisheries management rules will be discussed. Please note that last year the public hearings were held in September. All hearing times are 7 p.m.

DATE	DISTRICT	CITY	LOCATION
Jan. 7, 2014	4	Dublin	Bladen Community College
Jan. 8, 2014	5	Graham	Courthouse
Jan. 9, 2014	6	Norwood	South Stanly High School
Jan. 14, 2014	9	Murphy	Tri-County Community College
Jan. 15, 2014	8	Newton	1924 Courthouse
Jan. 16, 2014	7	Wilkesboro	The Walker Center, Wilkes Community College
Jan. 21, 2014	1	Edenton	Swain Auditorium
Jan. 22, 2014	2	New Bern	Courthouse
Jan. 23, 2014	3	Rocky Mount	Nash Community College

Cedar Island Boat Access Upgrade

The Wildlife Commission has completed renovations to a popular coastal Boating Access Area in Carteret County, and it is now open to the public.

The Cedar Island Boating Access Area, on the Pamlico Sound, has been made completely accessible for boaters with disabilities. It includes two new boat ramps and fixed docks and one new floating dock. The parking lot and access road have been paved, and include 17 trailered vehicle spots, and five single-vehicle spots.

"This site is popular for locals and draws tourists looking to access Pamlico Sound from across the state," said Erik Christofferson, chief of the commission's Division of Engineering and Lands Management. "Cedar Island provides important access for coastal anglers, wildlife watchers and recreational boaters, and these renovations are a wonderful enhancement to this beautiful site."

The renovations were paid for with motorboat registration receipts and funds from the Sportfish Restoration Program. For information about boating in North Carolina, including an interactive map of more than 200 free, publicly accessible access areas, visit ncwildlife.org/boating.

GEOFF CANTRELL/NCWRC

CALENDAR OF EVENTS

September 6–15

The N.C. Mountain State Fair celebrates the mountain region's people, agriculture, art and traditions.
Learn more at mountainfair.org.

September 7–8

There's waterfowl and wildlife heritage of Currituck at the 10th Annual Currituck Wildlife Festival at the Currituck County High School in Barco, just up from Coinjock. Carvers, painters, decoys —you name it.
Go to coinjockruritanclub.com for details.

September 21

If you like scorpions then you're in luck as they are the theme arthropod at the 17th Annual Bugfest held at the N.C. Museum of Natural Sciences in Raleigh. Join over 30,000 folks in learning about the bugs around you. While you're there go to Café Insecta for delectable insect dishes. Children under 16 must be accompanied by an adult.
See bugfest.org.

October 3–5

Do you have a seaworthy boat and a little luck? You can catch a king mackerel worth $50,000 at the 2013 U.S. Open King Mackerel Tournament to be held at the Southport Marina.
Go to usopenkmt.com for more information.

October 17 – 27

Drop by the N.C. Wildlife Resources Commission's exhibits at the N.C. State Fair in Raleigh. We'll have a shooting range, Sensory Safari trailer, mobile aquarium and giveaways. Plus, the food, rides and livestock are there, and some kid named Scotty McCreery is supposed to sing at Dorton Arena.
Visit ncstatefair.org.

Readers should check with the contact listed before traveling to an event. Items for listing should be conservation-oriented and should be submitted at least four months in advance to mike.zlotnicki@ncwildlife.org, or call 919-707-0175.

Operation Dry Water Results

The Wildlife Commission reported results from Operation Dry Water, an annual nationwide education and enforcement campaign to alert boaters to the dangers of operating a boat while impaired (OWI) that ran the first weekend in July.

"Arrests for operating while impaired in North Carolina were down this year from previous campaigns," said Maj. Chris Huebner, the state boating law administrator for the Wildlife Commission. "I think the majority of boaters understand the added risks and make the smart choices while on the water. With the upcoming Labor Day holiday and following months, I hope that continues to be the case."

The state results from Operation Dry Water in 2013:

- Vessels Contacted: 2,361
- Boaters Contacted: 6,041
- Citations Issued: 153
- Warnings issued: 326
- Non-Boating Violations: 190
- OWI arrests: 22
- Highest Blood Alcohol Concentration: 0.22 (three times the legal limit)
- Participating Officers: 171

The 2012 results included 6,152 boaters contacted and 32 OWI arrests. In North Carolina, OWI penalties include a maximum $1,000 fine and possible jail time.

Since the launch of Operation Dry Water in 2009 by the National Association of State Boating Law Administrators and the U.S. Coast Guard, the percentage of boating fatalities with alcohol listed as a contributing factor has decreased from 19 percent to 17 percent in the United States. Despite the decrease, OWI still accounts for a disproportional number of on-the-water deaths. In 2011, alcohol was a contributing factor in just 8 percent of boating accidents overall, but figured in 17 percent of boating fatalities.

For information on navigation rules and boating safety, as well as locations to boat and public access areas, go to ncwildlife.org/boating or call 919-707-0031.

Waterfowl Stamp and Print Available

The 2013 North Carolina Waterfowl Conservation Stamp and Print is available through the N.C. Wildlife Resources Commission's Wild Store.

The stamp and print feature a pair of Northern shovelers sitting along the water's edge, painted by Indiana wildlife artist Jeffrey Klinefelter. Signed and numbered regular edition prints with mint stamps sell for $145. The collector's mint stamp sells for $10.

This is the first year that Klinefelter has won North Carolina's waterfowl conservation stamp and print competition. He has won awards in other states, including Ohio, California, Colorado, Delaware, Oregon, South Carolina, Indiana, Nevada and Louisiana, where he placed first in 2012 with his painting of American wigeon at a marsh edge.

Proceeds from sales of the print and stamp support the Wildlife Commission's Waterfowl Fund, which generates revenue for the conservation of waterfowl habitat in North Carolina.

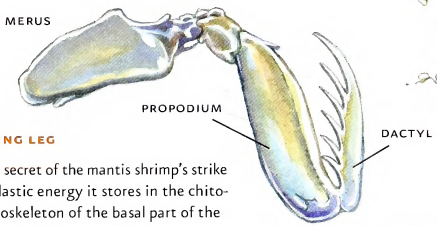
To purchase a print and mint stamp or for additional information, call the Wildlife Commission toll-free at 866-945-3746, or visit the agency's online N.C. Wild Store, ncwildstore.com.

How Can Mantis Shrimp Strike So Fast?

written by Clyde Sorenson
illustrated by Jim Brown

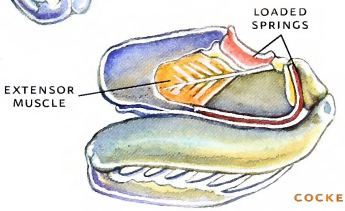
MANTIS SHRIMP CATCHING PREY

UNLIKE "CONVENTIONAL" SHRIMP, mantis shrimp are aggressive predators. *Squilla empusa*, the common mantis shrimp in North Carolina, is of the "spearer" type- meaning that it is adapted for ambushing agile, elusive prey like fish and other shrimp. The lightning-quick strike of the mantis shrimp is indeed incredibly fast– but it's driven by "slow" muscles.



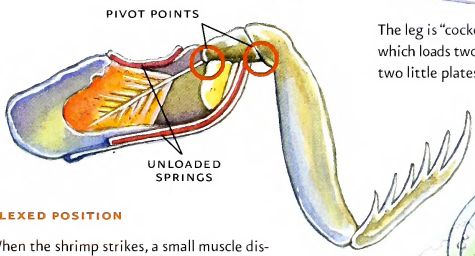
STRIKING LEG

The real secret of the mantis shrimp's strike is the elastic energy it stores in the chitonous exoskeleton of the basal part of the leg, the merus, in its striking legs. One of these springs consists of a saddle along the segment's top, while the other is a thickened, V-shaped structure along the bottom. Both of these springs have an increased calcium content, increasing their stiffness and their ability to store energy.



COCKED POSITION

The leg is "cocked" by the contraction of a long muscle in the merus, which loads two springs in this segment. Another small muscle moves two little plates to "latch" the leg.



FLEXED POSITION

When the shrimp strikes, a small muscle dislodges the locks, and the spring energy is released. Other small muscles help aim the leg and move the spined dactyl that impales prey at the end of the leg. The power and speed of the strike are enhanced by the lever action imparted by how the merus and the propodus are articulated.

Even though spearer type mantis shrimp strike extremely fast, the smashers that feed on sedentary mollusks strike much faster. They need the added energy to crush the shells of their slow moving, but heavily armored, prey.

SMASHER MANTIS SHRIMP

Phoebe and Friends

written by Jim Dean

I have never been a very serious bird watcher, at least not compared to some of my friends. I don't maintain a life list of birds spotted, but I keep a tattered "Peterson Field Guide to Birds" and a pair of binoculars in my old Bronco. A feeder full of sunflower seeds also hangs just outside my backyard window during the winter.

JIM DEAN

Two cardinals have become so tame and accustomed to my connection with seeds that they follow me, tweeting an insistent reminder anytime the feeder is empty, boldly swooping in to get their share as soon as I've gotten it refilled. If they think I'm some sort of large, flightless and benevolent bird, they're not far off the mark.

One of several birdhouses I've put up in the yard seems to have special appeal. It hangs under the eave of the carport, and typically houses at least two, and sometimes, three families in rapid succession every spring—wrens, chickadees and occasionally downy woodpeckers—each new family clearing out the old furniture and hauling in their own, sometimes hardly before the previous tenants have finished checking out. The newcomers fuss at me for not cleaning out the place for them (which I believe is my legal landlord obligation), but they have usually moved in before I realize that the previous family has flown the coop and abandoned their deposit(s).

"What the Eastern phoebe lacks in sportive attire, however, is more than compensated for in habit and activity."

My yard birds are entertaining, but they are a run-of-the-mill bunch of urbanites. The selection is far more diverse and charming at the family farm in Granville County, where the usual suspects are joined by dozens of bluebirds and other species better adapted to open fields and big woods. Electric-blue indigo buntings and bright red summer tanagers are among many colorful visitors. Goldfinches and prothonotary warblers show up every year, and I have seen Kentucky, Nashville and other less common warblers. Flights of cedar waxwings bombard the berry bushes in the fall, and sometimes I get a rare treat—Baltimore and Bullock's orioles or evening and rose-breasted grosbeaks.

For many years, loggerhead shrikes sat on the power lines and fences, hanging hoppers, small rodents and other kills on barbed wire or a thorn like avian leopards. Alas, these and other Neotropical birds have lost so much of their traditional Southern Hemisphere nesting habitat that they are rare hereabouts these days.

A few years ago, I was thrilled to see a peregrine falcon (no doubt a passing migrant) buzz one of the ponds, circling three times in pigeon-like flight looking, perhaps, for a quick duck snack.

Yet, the bird I most enjoy watching is drab in comparison to all of these—a sparrow-sized member of the flycatcher family that dresses like an elderly banker in mostly dull gray-brown with a slightly olive tinge. What the Eastern phoebe lacks in sportive attire, however, is more than compensated for in habit and activity.

A pair of phoebes usually sits in the maple in front of our farm cabin, fluttering to the ground to pick up a choice bug. Frequently, they hover like tiny helicopters, flitting among limbs or over tall grass to snatch flying insects in mid-air. Unlike other flycatchers, they tend to wag their tails up and down almost constantly when at rest. Phoebes like to nest in sheltered spots, bridges suit them, but they are not particularly shy around humans and will often nest under eaves of a porch.

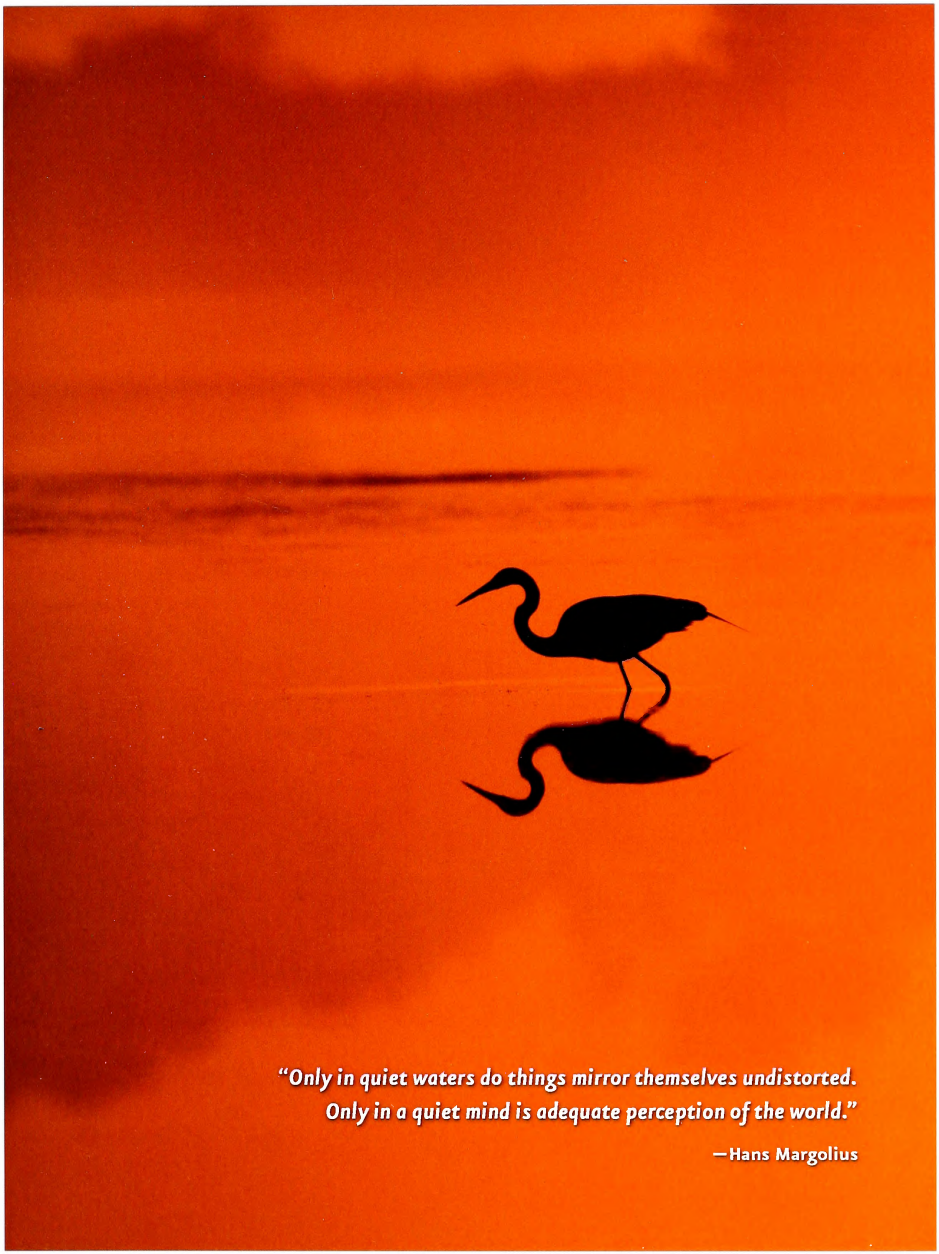
At the tiny mountain cabin I rented for many years, a pair nested on top of a light bulb on the porch, building a nest of moss that grew taller with each generation. One spring evening when I arrived after a lengthy absence, I opened the back door as I turned on the porch light, and a phoebe flew into the cabin and fluttered around frantically until it finally settled on the refrigerator. I propped the front and back doors open and went fishing. When I got back, Miss "Pheebs" was back on her nest.

The back porch light bulb at the farm has a similar mossy nest, but this spot has recently been abandoned for a more artistic nursery—a set of deer antlers mounted on the front porch. The phoebe's tall nest sits squarely on top of the skull, framed elegantly on either side by the seven-point rack.

Like other phoebes whose acquaintance I have made, this pair has quickly adapted to my benign company, going about their business with little concern that I am sitting in a rocker a dozen feet away.

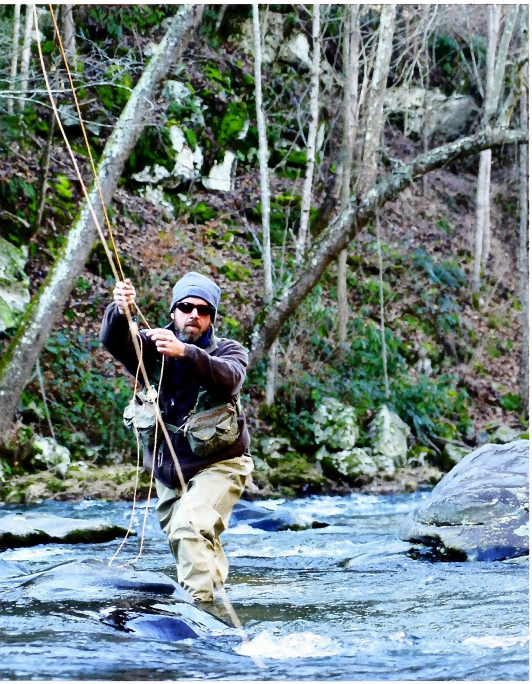
It seems a pity, however, that another bird has nearly disappeared as the farm has become more and more an island in a sea of development. Once, there were five or six coveys of wild bobwhite quail here, and some of those coveys occasionally reached cyclical high numbers of 20 or more birds. Now, except for a random pair or a remnant covey of half a dozen, the gentleman bobwhites are gone.

Sad business, and nothing to wag your tail about.



Great egret at sunrise

IN THE NOVEMBER · DECEMBER ISSUE



MELISSA McGAW/NCWRC

WINTER TROUT FISHING
Effective techniques for fooling tail-race trout during the cold months.

WOODIES AND 'YAKS
Kayaks have a niche with waterfowl hunters, particularly those seeking wood ducks.

SEAFOOD DELIGHTS
November traditionally is a time of enjoying good food, in this case shrimp, oysters and a Low Country Boil.

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